Scientific American.

THE ADVOCATE OF INDUSTRY, AND JOURNAL OF SCIENTIFIC, MECHANICAL AND OTHER IMPROVEMENTS.

Vol. 3. New York, January 8 1848. No. 16.

THE
SCIENTIFIC AMERICAN:
PUBLISHED WEEKLY
At 128 Fulton Street, New York (Sun Building,) and 13 Court Street, Boston, Mass.
By Munn & Company.
The Principal Office being at New York.

TERMS---$2 a year---$1 in advance, and the remainder in 6 months.

☞See advertisement on last page.

Poetry.

SATURDAY NIGHT.

BY DR. BOWRING.

The week is past its latest ray
Is vanished with the closing day;
And 'tis as far beyond our grasp
Its now departed hours to clasp,
As to recall that moment bright,
When first creation sprung to light.

The week is past! and has it brought
Some beams of sweet and soothing thought?
And has it left some memory dear
Of heavenly raptures tasted here:
It has not winged its flight in vain,
Although it ne'er return again.

And who would sigh for its return?
We are but pilgrims born to mourn;
And moments as they onward flow,
Cut short the thread of human woe,
And bring us nearer to the scenes
Where sorrows end and heaven begins.

BURIAL OF THE SEED.

TRANSLATED FROM THE GERMAN.

Now, my seed, thy grave is made;
In thy silent chamber laid,
Thou mayest slumber lightly;
May the sun his radiance lend
And the dews of heaven descend
On thy pillow nightly.

Could'st thou gentle one,
Could'st thou feel what I have done,
Thou would'st whisper weeping,
Ah green earth and bright blue skies,
Never more may greet my eyes,
All in darkness sleeping.

Yet sleep on thou seedling dear;
Sweetly sleep nor dream of fear,
Soon from slumber waking,
Once more again shalt thou behold
Morning sunlight bright as gold,
O'er the green earth breaking.

I at last must sink like thee,
Hands of love shall bury me,
Heaping cold earth o'er me;
But when God beyond the skies,
Bids the slumbering dead arise,
May I awake to glory!

GIVE A TRIFLE.

BY D. C. COLESWORTHY.

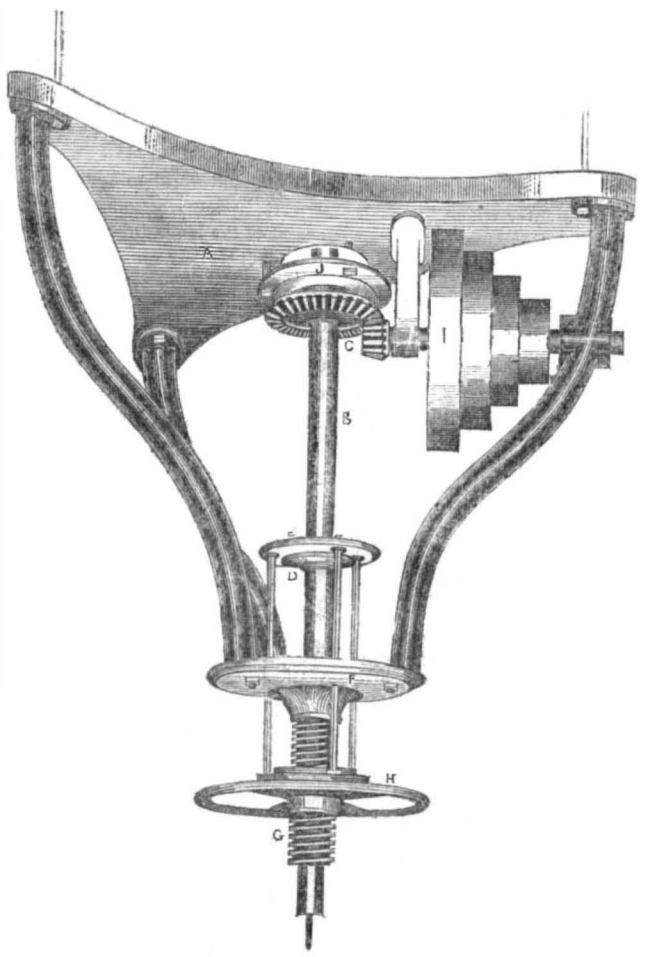
It is a trifle—give a mill
To help the poor along;
Tis not the amount—it is the will
That makes the virtue strong.

"I have but little," never say,
'Twill not avail to give:"
A penny, if you give to-day,
Will make the dying live.

It is the spirit, not the gold
Upon the waters cast—
That will return a hundred fold,
To cheer and bless at last.

Then give a trifle cheerfully
From out thy little store,
With interest 'twill come to thee
When thou wilt need it more.

HARTSON'S IMPROVED DRILL.



Let us talk as we may about improvements in machinery, or the application of old principles in a superior manner to purposes of real utility, still the fact cannot be gainsayed, that the most feasible or useful invention, may be rendered useless by a faulty construction of some of its parts. The most certain road to perfection in mechanical invention, lies in the superiority, the perfection of those machines which are used as tools to construct the various parts of compound machines. The Turning Lathe for example, is an essential machine to construct every other machine, and according to its qualities, so are the qualities, of machinery, good or bad, that is finished in a machine shop. The Drill is no less a useful machine (a good tool) in every machine shop, and Mr. Hartson, the constructor of the above Drill, and also of the very fine Lathe that appeared in No. 5 of this volume of the Scientific American, is a mechanic who has a very fine taste and a strong passion to see good tools and exhibits as great ingenuity in the construction, as he shews a determination of making nothing but the most superior, durable and correct machines.

EXPLANATION.—A, is a bed plate on which the whole machine is built, and is thereby rendered portable, and obviates one great difficulty in the old machines, to wit, a liability of the drill springing and an untrue bore being the result This bed plate gives solidity, and hereby greater correctness. I, is the largest pulley on a gang of four for the band which by this arrangement will allow of a great variation in the revolutions of the driving shaft. This driving shaft is geared into a bevil wheel C, on shaft B, by a pinion on the main shaft. The main shaft is braced or supported by a suspended bearing near to the pinion. J is a collar cup bolted to the bed plate and filled with oil, tallow, or other lucubrating material. In the inside of the wheel or cup the shaft or spindle B, can move up or down on a feather and slot, while C, the cog wheel, always keeps its place, E, is another cup for the same purpose, as the one above and D is a collar fixed on the spindle, but attached inside of E by a nut so that there is room for the whirling of the shaft, and yet the combination of the collar with the screw to regulate working is very beautiful and simple. F, is another cup attached to a threaded collar for working on the screw The cups for holding the lucubrating material are also used for bracing the spindle. H, is the handle to regulate the drilling and by it the drill is geared and ungeared with the work to be drilled. Mr. Hartson makes nothing but the best kind of machines, and every mechanic will see that for the common use of drilling in iron, this Drill is a great improvement upon those in common use.

Mr. Hartson's machine shop is at No. 42 Gold St, where all information can be had by communicating by letters post paid.

A Russian Croesus.

M. D. Tiszkiewies, the richest man in Russian lithnania, died a short time since. The St. Petersburgh papers inform us, that he has left to his three sons 2,060 villages, containing more than 60,000 serfs; and in ready money, 10,000,000 of crowns. It was this gentleman who was said to have refused the hand of his daughter to Duke Alexander of Wirtemburg who afterwards married the Princess Maria d'Orleans. We would not finger a penny of such Russian money.

Jenny Lind.

The Berlin Papers state that the "Swedish Nightingale" has been presented with a very beautiful parure in diamonds said to be of the value of 400,000 francs, ($75,200.) This valuable present was raised by the subscription of the nobility and gentry of the Prussian capital.

We will bet a cookey that some of these fellows screwed down their Tailors, Barbers, and Shoemakers to show their wonderful generosity to a singing girl.

RAIL ROAD NEWS.

The Cleveland and Cincinnati Railroad is in a fair way to be completed. By this route passengers will avoid the vexatious delays caused by the bar at Sandusky Bay, and be enabled to take the first class boats running on the lake, which can at all times enter the harbor of Cleveland. Of the two routes, that by the way of Cleveland will undoubtedly have the preference, and after its completion, it must have important influence upon the revenue of the road terminating at Sandusky.

Railroad Expenditures.

We notice a paragraph in the papers stating that Prof. Walker, of North Brookfield, Mass., in a recent letter to Senator Smith of Illinois, says the liabilities of the Boston capitalists for new railroads and the purchase of old ones amounted in Sept last to ten millions of dollars.

City Electric Telegraph

The posts for the Telegraph of Downing, O'Reily & House, are now being put up in this City. They start at Fort Washington and terminate at the City Exchange—furnishing facilities for the Police Department, in the progress of its wires through the City. The line will pass down at Frankfort st. to William, and thence to Wall—the Common Council having appropriated $500 for the use of Telegraph in the City. for the Departments of Fire and Police.

Telegraph.

The posts are all erected for the Providence and Worcester Telegraph, and a part of the wire has been placed. The workmen are making very good progress on the New Bedford Taunton, Fall River and Providence line

There is now communication between New York and St. Louis, by Telegraph.

Telegraph in France.

On the 24th of November at a meeting of the society of Arts held at their house, in the Adelphi in Paris, when a discussion was held relative to the communication between the guard and the driver of a railway train. Five different schemes were presented, but Messrs. Brett and Little's on the electric principle, and Mr. Dutton's on the accoustic communication attracted most attention. The accoustic communication is by propagating sound along a tube and finally through a whistle.

Telegraphic Wedding.

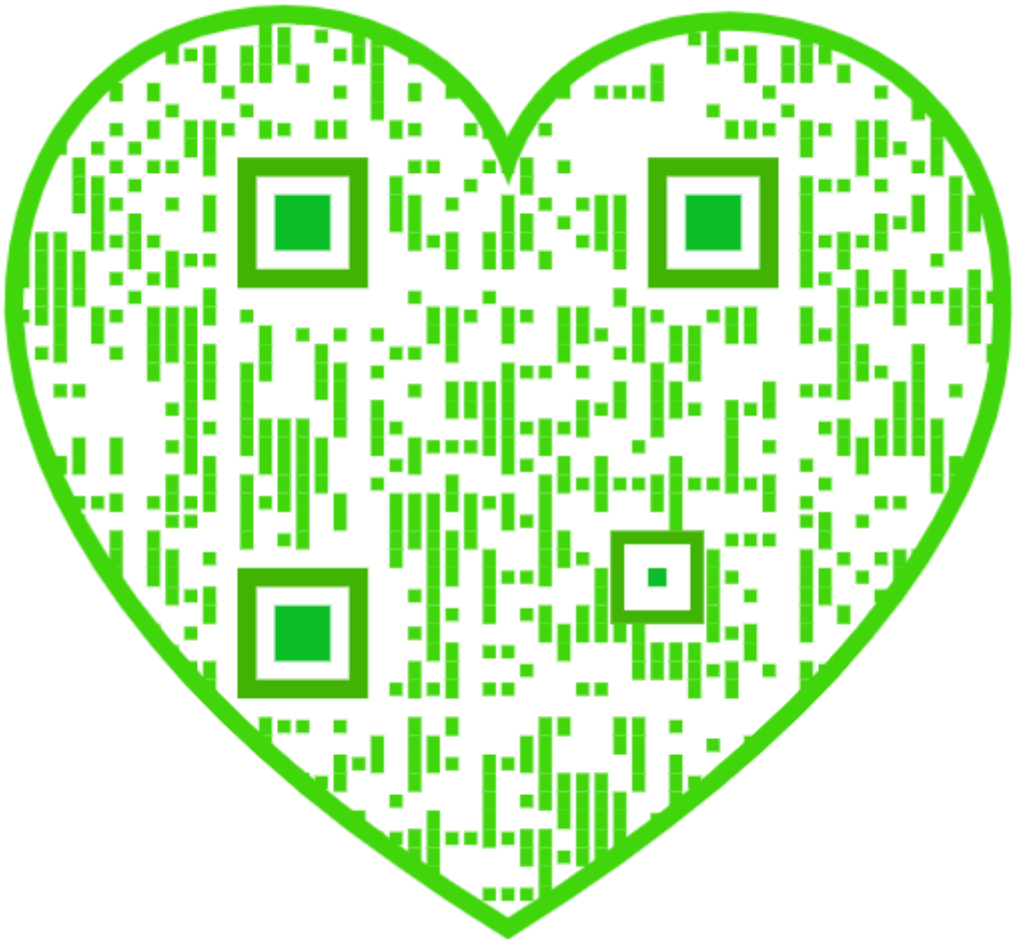
A gentleman of Cincinnati and a lady of Philadelphia were married in the latter city, on Thursday night of last week, and the fact being communicated by telegraph, the wedding feast was held simultaneously in Cincinnati and Philadelphia. The "joy greeting," and the response were telegraphed, the Cincinnati Commercial says: and, therefore, though strange as it may seem, this wedding celebration had participants in persons separated by nearly a thousand miles. What will science do next?

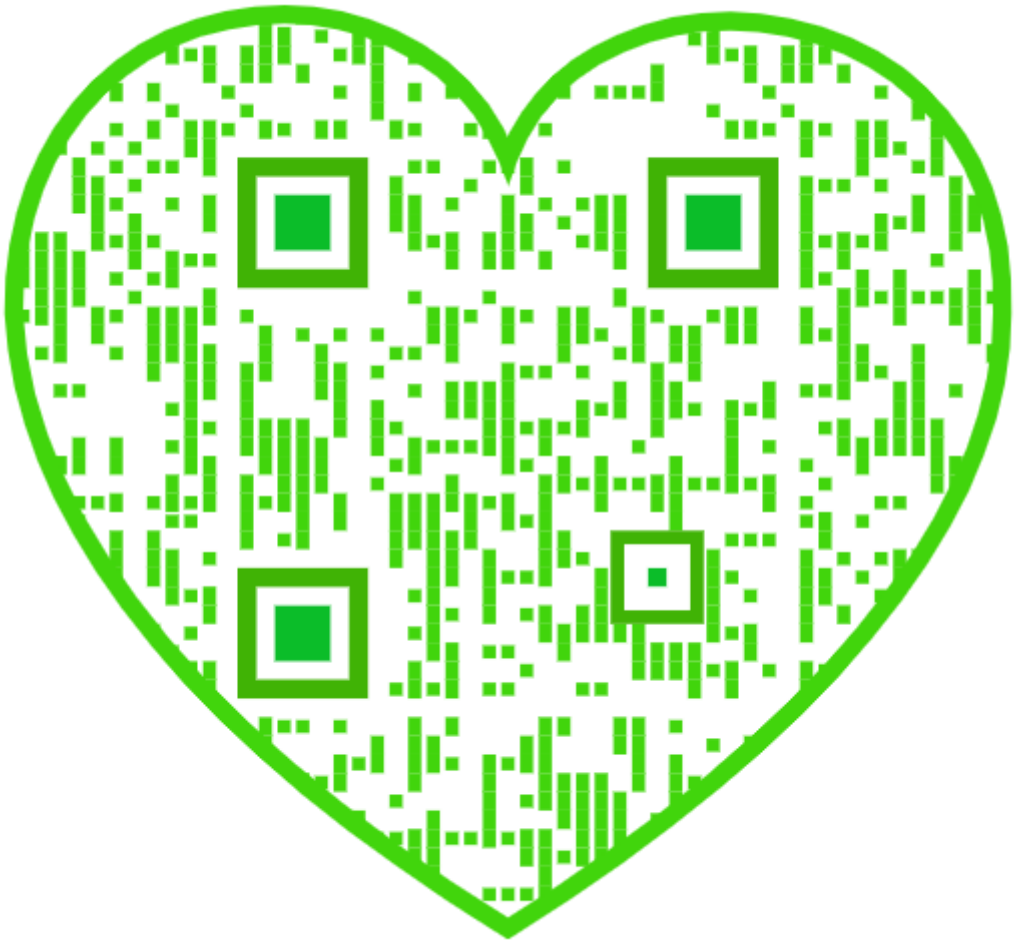
The Opium Trade.

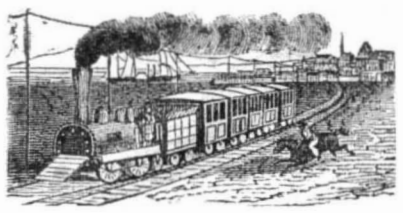
A Committee in the British House of Commons report the entire value of imports into China as $43,296,782, of which twenty-three millions dollars are paid for opium. Large quantities are used in other countries, Siam, Hindostan, &c. Its horrid effects are seen in the sallow sunken cheeks, the glassy, watery eyes, the idiotic look and vacant stare, and all the loathsome ruin that vice can bring upon the human body and soul.

At a late sale of books in England, the auctioneer put up "Drew's Essay on Souls," which was knocked to a shoemaker; who very innocently, but to the great amusement of the crowded room, asked the auctioneer if he had any more works on shoemaking to sell."

© 1848 SCIENTIFIC AMERICIAN, INC







American Inventor's Institute.

We have been shown a circular issued in this city, presenting the outlines of a scheme for establishing an Inventor's Institute. The shares are projected at 5 dolls. each, and any person engaging to become a stockholder is to pay 25c. to a canvassing agent and receive a printed receipt for the same signed by the projector, who, very courageously takes the whole burden of organization upon his own shoul ders, and no doubt will manage the affair very adroitly. There can be no question as to the benefit that would acrue to many by the establishment of an Inventor's Institute, were it possible to get able and disinterested men to engage in it, but all such institutions that have as yet been organized or proposed have been rather injurious than beneficial to inventors, and the fault must have been, we think in their management. We are afraid that this proposed joint stock inventor's institute, promises too much, to fulfil any of its promises, as it holds out the preposterous hope of a hundred per cent of dividends to stock holders. We should like to see the names of a number of our leading and respectable citizens published as being engaged in this project, as some may look upon such a scheme rather suspiciously, for no financial report of those Institutes have been published and people now a days are beginning to look into such schemes before they leap into them.—*New York Sun.*

What scheme is this which now comes forward rank with craft to mulct inventors out of their hard earned cash. We have warned and re- rned inventors about the designing views of all schemers who are great pretended philanthropists. If the National Association of Inventors was a great failure, having so many advantages over such a scheme as this, who is not able to predict that this project is another Mississippi bubble on a small scale? We consider it our sacred duty to be honestly true to our mechanics, inventors and scientific citizens by warning them of all designs that have the appearance of deceiving them. Yet it would certainly give us much pleasure to behold an Association firmly and nobly established that would protect the rights of inventors and be the means of assisting poor inventors to complete inventions, and suitably rewarding them for valuable discoveries, but we know tbat all such previous schemes have only resulted in duping those who placed confidence in them, and this we venture to say, will not be an exception.

New Copper Mine

We have been shown some splendid specimens of copper ore taken from a mine lately discovered near Shannonville, about five miles from Morristown, Pennsylvania. The samples were in the possession of Mr. Osborn, an eminent mineralogist who has been extensively engaged in the business of smelting. He says it is perhaps the richest vein of copper in the United States, taking all things into consideration. It is but a few miles from the Reading Rail Road and the process of mining can be accomplished easily, owing to the dip of the seam of ore.

Edinburgh Phrenological Journal.

The enterprising publishers of Phrenological works in this city, Messrs. Fowlers & Wells have just commenced the republication of the Edinburgh Phrenological Journal, a truly magnificent work. The January number lies before us and from the beautiful letter press, and in fact from the beauty of the work taking it all in all, we think that the publishers may feel proud of their enterprise.—Published monthly at the office of the American Phrenological Journal, 131 Nassau st, price 50 cents per number.

In Ohio, the quantity of tobacco raised this season is supposed not to be over 6000 or 8000 hhds., against 20,000 last year.

Law's Stave Dresser and Jointer.

These machines, which have appeared in separate engravings at separate times in the Scientific American, one in this number and the other in No. 14, are intended to be joined together, the one working very conveniently into the other. As the staves leave the Dresser, they are taken hold of by the dogs of the Jointer and put through in a rapid and complete manner. These machines have been highly spoken of, and the great benefits about them are, that they are self-feeders. We should have noticed them more at length respecting their merits, but we were not willing to lengthen out the articles which described their operations. A full sense of their importance and value, and method of operation will be best attained by reading first the description of the Dresser and afterwards that of the Jointer—as the two machines are intended to work together, and there are a number of minor points of the Jointer which Mr. Law is now engaged on, in making one of the most perfect stave dressing machines.

Rock Driller.

Messrs. Pardon T. Wightman and H. Vaughan, of East Greenwich, Mass., have invented a valuable improvement in a Drilling Machine for drilling rock, which has come highly recommended to us by those who have seen its operations. It is an invaluable invention and is justly esteemed as such. We will be able next week to present an engraving of it and a full description.

Cobalt and Nickel Mine.

In the Wallace mine on Lake Huron, C. W. Nickell, and Cobalt have been discovered in combination with the copper ore. We should be glad if Nickel would get so cheap as to be used as an alloy with iron. Then we would have a metal that would not be oxidized and would last forever, for guns, houses, shipbuilding, and in every art in fact this metal would cause a complete revolution, and a desirable one.

New Post Offices.

The following Post Offices were established by the Post Office Department, Dec. 16, 1847; —Point Isabel, Clermont county. Ohio; Swellsville. Belmont county, O · Harrison Desha, county, Ark.; Rockhold, Sullivan county, Tenn.; Green Meadow, Washington county, Tenn.: Buena Vista, Platte county, Mo.; Conn's Creek, Pulaski county, Mo.

What the Telegraph can do.

The Albany Evening Journal, one day a short time since telegraphed to a friend about thirty miles from St. Louis, and received a message in the course of two hours. The distance was 2,500 miles, and all this done in such a short time after a pretty wild goose chase to get hold of the chap, who it seems had to be bunted up.

Florida

The Legislature has adopted the proposed amendments to the State Constitution providing for biennial sessions of the General Assembly, and one year's residence as the suffrage qualification. They are now a part and parcel of the Constitution.

Singular Decision.

The London Observer states that it has been decided recently by Lord Denman and the other Judges of the Court of Queen's Bench, that according to the new law of England, a marriage with the sister of a deceased wife is absolutely null and void, and as a matter of course all the children of such a marriage are illegitimate.

Lead Mine.

An extensive and rich bed of lead ore has recently been discovered on Turk Creek Camden county Missouri. The prospects are so flattering, that arrangements are on foot to commence working immediately on an extensive scale. Small quantities have already been raised and smelted, which will yield full 80 per cent.

Reformed Medical Practice.

Prof. Finney, of Oberlin, has lately gone through a regular course of typhus fever, and recovered without the use of any medicine or stimulants whatever. It is said that for fourteen days he tasted of nothing but cold water.

Population Statistics.

The population of the globe is supposed to be under a thousand millions, or according to M. Hassel, 637,852,000. If then, says a French writer, all mankind were collected in one place, every individual occupying a square metre, the whole might be contained in a field ten miles square. Thus, generally speaking, the population of a country might be packed without much squeezing in its capital. But the mean idea this gives us of the number of the human race, is counter-balananced by it capability of extension. America and her Islands are said to contain of productive land 4,000,000 square miles of middling quality, each capable of supporting five hundred persons. According to this calculation, the population of this continent as peace and civilization advance, may attain to the extent of 2,000,000,000. If we suppose the surface of the old world to be double that of America (and notwithstanding the comparitive poverty of the land, this calculation may be accepted it we say nothing of Austrialia and the various archipelagos,) it would support 4,000,000,000; and thus the agregate population of the entire globe might amount to 6,000,000,000, or six times the present number.

Massachusetts Girls.

Over one million of straw bonnets and hats, valued at $1,057,892, were manufactured during last year by the fair hands of Massachusetts girls.

Life Prolonged by Science.

As an evidence to prove that an advanced state of science, and the improvement in the condition of the various classes of society, tend to prolong life, the following statement is made. It has been found that the average length of life of persons born in Geneva was, in the 16th century, less than 9 years, in the 17th the average arose to 13: in 1760 it had increased to 27; in 1800 it was 21; in 1813, 40; in 1832 45.

Improvement in Sugar Manufacture.

A valuable improvement has been made by a Mr. Watson in the Island of Jamaica for the manufacture of Sugar. The cane juice goes through an entirely new system of purification, in which the sacharine matter is converted into a liquid as transparent as spring water. Upon evaporation it yields sugar of the purest white. The expense of thus making white sugar from the juice is about the same as manufacturing the common brown, and the improved method saves *all* the juice now wasted or converted into molasses. The invention has been patented in England and France and likewise in the United States.

Holden's Dollar Magazine.

The first number of this magazine has been laid on our table, and we are at once prepossessed in its favor. It contains to use a commonism, "a world of reading matter." Sixty-four closely printed pages of matter, and good matter too for one dollar per annum. It should receive a wide spread circulation, and we have no doubt but it will. Mr. Holden's enterprise deserves much praise, and certainly success cannot but attend his efforts. It is the cheapest magazine in the United States. For particulars see the advertisement on another page.

File Machine.

The File Cutting Machine which was credited by the N. Y. Tribune of last Monday as being taken from an English journal and appearing as an English Invention reads as it appeared in our columns a long time ago, and was copied therefrom by said English journal. It was invented at Portsmouth, N. H., and we believe it has been sold to a Mr. McIntyre of that place. The English do not import their files and what are now manufactured in this country are the work of Englishmen. We suppose that no less than $100,000 worth are made yearly at Sing Sing under the superintendance of Mr. Russell an Englishman. The hand manufactured files are made mostly in England, but the machine referred to above is an American invention.

Property of Married Women.

The Senate of Vermont has passed the bill by 18 to 8 securing to married women the sole right in their property.

From Europe.

By the arrival of the Caledonia from Boston on the 4th inst., we have information that the Freneh Steamer Union put into Cherbourg, on the 1st of December, leaky, and pumps choked, and that the New York, French steamer put into Havre on the 12th Dec., with 6 feet water in her hold, thus justifying what we said when they first came here, regarding their nautical architecture.

The war in Switzerland is at an end, and money was perfectly flooding into the London Exchange. The Cotton market was dull; Sea Island from 7 1-2 to 8d. Ireland was more quiet: Parliament was occupied with its affairs entirely.

Independance of British Dependencies.

There are some inequalities in favor of the smallest of the British Isles, which compensate for many inconveniences. The inhabitants of the isles of Man, Jersy, and Gurnsey, are exempted from some of the heavy taxes imposed upon the people of England. Every pound of tea consumed in England, whatever be its quality. is taxed 2s. 2 1-4d, or about 54 cents, while tea comes into Jersey and Gurnsey free of duty. This gives the tea drinkers of those small islands an immense advantage over the large islanders. Their annual consumption is 5 lbs. 4 oz. per head; while in England it is 1 lb, 10 oz. per head. The English tea-drinkers are beginning to grumble at this disparity.

Spare Minutes.

Spare minutes are the gold dust of time; and Young was writing a true as well as a striking line, when he taught that "sands make the mountain, and moments make the year." Of all the portions of our life, the spare minutes are the most fruitful in good or evil. They are the gaps through which temptation finds the easiest access to the garden of the soul.

Cold Water for Burns.

Mr Seth Hunt of Northampton, Mass. gives the following statement of the treating with cold water a severe burn and scald in his family.

"Cold water was applied, by immersion till pain ceased; the water being changed as often as it became warm. The part was then swathed with wet bandages, a dry woollen one enveloping them, until the injury was healed. The healing was rapid, and effected without leaving a scar."

A Curious Fact.

It is stated by some statistical hunter, that the sum annually expended for bread by the population of Great Britain and Ireland amounts to twenty-five millions sterling, while the money expended in distilled and fermented drinks amounts to upwards of fifty millions annually.

A New Invention for Making Bricks.

The Boston Post says that Jonathan Ward, of Cambridge, a practical brickmaker, has invented a machine for making bricks which will work wonders in cheapening the price of that essential item in building. It will turn out twenty-five thousand bricks a day.

Robert A. Small of Louisville Ky. has also invented a Rotary Brick Machine which will we think be of great benefit to the country.

Chamber's Miscellany.

No. 10, of this interesting publication has just been issued and may be had at Berford's No. 2 Astor House.

Gold Pens.

We have a few more left for the extremely low price of $1,25 mounted with heavy silver cases.—See advertisement.

Coal.

The coal beds of Pennsylvania have yielded a vast supply this season—no less than two millions nine hundred aud sixty-five thousand and 62 tons.

It is said that Senator Cameron has adopted for his family ensign, and has it engraved upon his letter stamps, a Printing press, over which stretches the word "Persevere."

A model farm is established near Paris to raise pheasants and American prairie hens.

Louis Philippe is said to be engaged, like Cæsar, in writing his own commentaries.

© 1848 SCIENTIFIC AMERICIAN, INC

Artificial Stone.

We noticed some time ago that a process for making artificial stone was about to be patented in England, and by one of our late exchanges we learn that a patent has been secured and that the stone is now made artificially equal to granite and statuary marble. This invention is, from its cheapness a great advantage for all the purposes of architectural decoration; and from its plastic nature before it becomes hard of great service to sculptors, in taking casts of statuettes, busts, &c,, and even of figures of the size of life. The cost is in all cases where carving is required in stone in which this composition was substituted, less by nine-tenths. The invention is founded upon the chemical analysis of the natural varieties of stone, and the manufacture is capable of such modifications as are requisite to produce all the varieties. The artificial stone is less absorbent than natural stone, and is superior in compactness of texture, and will resist frost, damp, and the chemical acids. It is made of flints, siliceous grit, sand, &c., rendered fluid by heat, and poured into moulds as required till cool and hardened. Its solidity and strength enable it to resist more blows than real stone. Specimens of the invention, to be seen in the office of the works, No. 6, John Street Bedford-Row, London, are exceedingly curious; they consist of many varieties, some being plain pieces of coping stone, stones for variegated pavements, and some more elaborate, having flowers and devices apparently cut with the chisel. There are also some grindstones, and hones, used by agricultural laborers for sharpening scythes and tools. The invention is also applicable to the lining of cisterns and water pipes, its vitreous qualities insuring cleanliness. Its cheapness is also a matter of consideration to those who require ornamental additions to houses.

Curiosities of Food.

The black broth of the Spartans was a famous dish, but like Dionysius, we are not such Spartans. The Dutchman can eat with great zest his sour fermented cabbage, and the Scots Highlander his braxy sheep. The Esquimaux can eat oil soap and what not and there are numerous tribes of Indians that live upon a certain kind of clay. The old Angles lived upon acorns and pork, the modern Angles upon coffee and beef. The food that is suitable to one people may not be so to another, and climate makes a great difference in the different kinds of food that should be eaten. What inhabitant of the torrid zone could live with impunity upon blubber as the inhabitant of the frigid zone can? Nature allows the appetite to decide for itself, as the conscience checks or approves good or evil acts. These promptings of nature may no doubt be destroyed by resisting its primitive teachings, but still it is a monitor, and no even rule of a certain kind of diet can be prescribed that will answer equally for every person. More physical evils arise from gorging the stomach than from any certain kinds of food. Moderate eating and plenty of exercise in the open air, is a sure remedy for many diseases, and certainly a greater preventive of, than remedy for, disease.

Education.

Accustom a child as soon as it can speak, to narrate his little experiences, his chapter of accidents, his fears, his hopes; to communicate what he has noticed in the world without, and what he feels struggling in the world within. Anxious to have something to narrate, he will be induced to give attention to objects around him, and what is passing in the sphere of his instruction, and to observe and note events will become one of his first pleasures; and this is the ground work of a theughtful character.

Kindness in Conversation.

"There is no way in which good can be done to others with so little expense and trouble as by kindness in conversation. 'Words,' it is often said cost nothing: but kind words are often more highly valued than the most costly gifts, and they are often regaded as among the best tokens of a desire to make others happy."

A Sensible Girl.

Some years since a young lady remarkable for her maturity and good sense, daughter of a distinguished lawyer and member of Congress from Worcester county, was placed at a young ladies' boarding school in the neighborhood of Boston. Her unaffected manners, and sprightliness of character, soon attracted the attention, and won the affections of many of the young ladies, who were full of their kind offices, until one day they inquired of each other the occupation of their fathers.—Our fair friend, perceiving the drift of their enquiries, gave them to understand that her father was a shoemaker; when many of them were struck with horror at her low and vulgar origin, and a change was at one perceptible in their conduct towards her. She however, though fully understanding them, remained quiet After a while, the father of the young lady visited the school. As he was a good looking man, and as they observed that the principal and others treated him with great deference and respect, the scholars were led to inquire of their instructress who he was, and what was his business; and on being told that he was the father of Miss H. and that he was a member of Congress, they were filled with amazement and immediately made the attempt to renew their attentions as formerly, but it was too late; she looked on their conduct with such perfect contempt, that they were obliged to keep at a respectful distance, while those who had treated her with kindness, without regard to her father's supposed occupation, were ever after her favorites. May the time soon come when modest worth shall be a standard of respect, whether the individual is rich or poor, learned or unlearned, a member of Congress or a humble shoemaker.

Don't Miss a Chance Girls.

Two servants who lived many years together, with an old gentleman in Northamptonshire, were one evening sitting by the kitchen fire, when the bachelor said to the maid "Hannah you and I have lived many years together, and been very comfortable; master gets very old and shaky, and can't last long; and when he dies we shouldn't like to part. So suppose we be married: we've saved a bit of money apiece, and when master's gone should live on a piece of land. What sayest, yes or no, at once?" Hannah repiied, "No Peter, I'd rather not." Peter said no more about it. The next night the same parties sat in the same place. After a little time, Hannah said, "Peter, I've been thinking about what you said last night, and have altered my mind." Peter answered in three words, "So have I."

Aquatic Race.

On Tuesday last the great race took place between the Yacht Sloop Iris, which challenged all Boston commanded by British officers built in Halifax, modelled and rigged after the fashion of an English cutter, and two Boston pilot boats, the Sylph and Anonyma; all three being about the same tonnage. From half way between Fawn Bar and Nahant, they filled away and beat up to the city, a distance between 10 and 11 miles. The wind was westerly, not very fresh, what seamen call a "whole sail breeze," and the weather pleasant except a flurry of snow which lasted about half an hour, towards the close of the race. The Sylph reached the wharf a little before five o'clock, at which time the Iris was more than two miles astern, and the Anomyna about half a mile astern. It was intended that a trial of speed should have been made between the Iris and Mr. Perkin's yacht Coquette, but the Coquette was not ready.

The Best Patrimony.

A man may leave a patrimony to his son; but how soon it may be mortgaged! He may leave him money; but how soon it may be squandered! When he gives him a sound constitution an unblemished reputation, a good education, and an inward abhorence of vice, in any shape or form, these cannot be wrested from him, and are better than thousands of gold and silver.

An Anti-Chewing Tobacco Society were recently organized at Union Hall, Boston. Among those who signed the pledge were several hard chewers,

Improved Firearms.

Dr. Jager, a German, has obtained patents in England for an improved method of igniting the charge in firearms, and has exhibited some very beautiful fowling pieces manufactured at Vienna, to which the invention is applied. The gun is loaded with a cartridge containing both powder and shot, or with two cartridges one containing powder and the other shot, or with a cartridge containg powder, with shot put in loose and covered with wadding. The end of the cartridge is so shaped as to fit into the conical chamber of the breech of the gun, and contains a small quantity of fulminating powder. Immediately over this is the touch hole. The cock of the gun is furnished with a small spike which enters the touch hole, and striking the cartridge, instantly explodes it. There is no nipple and no cap. —The rapidity of loading and firing is increased threefold. The interior of the barrel is kept clean and the discharge is quicker than in ordinary guns, It is obvious how great an improvement this is for military guns, more especially for cavalry, and how useful it is for sportsmen. Some of the guns exhibited had the cock beneath the stock, forced to strike upwards, and protected by the guard. The Invention has been shown to his Royal Highness Prince Albert, who has expressed himself highly pleased with it.

Value of Sawdust.

From the Portland Advertiser, we learn that shipping lists report at Frankfort, Dec. 10th "six small vessels loading with saw dust for Charlestown, Mass." The *commodity* is designed for packing ice at Charlestown and Cambridge—the great sources of the ice trade for almost the whole world.

A respectable income is now derived, at several places in that State, from the sale of pine sawdust, for this purpose, and the transportation gives employment to considerable tonnage. Thus the exigencies of luxury within the tropics and in many of the largest citi es in the world are giving encouragement to the minutest results of industry in the "down east" regions of Maine.

At the steam saw mills, it is well known that the sawdust forms a large part of their fuel. Yet so little were either of these uses thought of till lately, that upon the erection of the first steam saw mills at Hallowell (the first in the state) it was deemed necessary to pass a law prohibiting the owners from obstructing the channel, by throwing sawdust into the river. Similar laws were paased to meet similar cases, Such legislation is now obsolete, and an article once deemed worthless, now teaches us to despise not small things.

Hanging By Telegraph.

The electric telegraph in England has been put to a very unusual and important service recently, of which an account is given in the London Times. A man was to be executed at the Maidstone jail, but before the hour appointed for fulfilling the sentence, a message was received at the London Bridge terminus from the Home Office, requesting that an order should be sent by the electric telegraph instructing the under sheriff at Maidstone to stay the execution two hours, as the case of the culprit was being reconsidered. Shortly after the transmission of the order deferring the execution for two hours, a messenger from the Home Office conveyed to the Secretary of State's order that the law was to take its own course, and that the culprit was to be at once executed. Mr. McGregor, one of the officers of the Telegraph Company, considered the second telegraph despatch as equal to a death warrant, requiring the signature of the home Secretary, to be affixed in the presence of their responsible officer, in order to be sure of its correctness. The messenger from the Home Office could not be certain that the order for execution was signed by the Home Secretary, although it bore his name, the Secretary on being informed of the difficulty, approved of the conduct of the telegraph officers, and affixed his signature in their presence when the man was hung.

A Good Deed.

Congress is about to take measures to stop the circulation of the small depreciated Spanish coins.

Generosity.

We always take pleasure in eulogising generous actions, those displays of the better par of our nature. The religion of Jesus is that of charity, unbounded generosity. "If thy neighbor thirst give him drink, if he be hungry give him food, if naked clothe him," is the command of him who went about continually doing good. The losses and sufferings by the recent floods on the Ohio River affording an opportunity for the display of generosity, and we learn by the Cincinnati papers of the following instances of liberal and praiseworthy conduct,

Messrs. T. & W. Gaff,. millers of Aurora, had several hundred barrels of flour on hand, for whieh they were offered five dollars per barrel, by a man, who, in view of the prospective want of provisions, intended to speculate in the article. Messrs. Gaff, refused the offer, and turning to the clerk, ordered him to give a barrel to any poor man who needed it. And in this way dozens of barrels were given to the necessitous without charge.

At Lawrenceburg, Wm. E. Craft. Esq., caused it to be proclaimed to the houseless and needy, "Here are my warehouse and store—here are flour and meat; come and take what you need." And his clerks dealt them out to them as they came. Lewis & Engelbrecher caused the same thing to be made known concerning flour at their mill, and gave away to the destitute and unfortunate more than one hundred barrels. Messrs. Barr & Febiger had a number of their hogs slaughtered and cut up and given to a number who needed and wished.

One of the subordinate Lodges of Odd Fellows at Cincinnati promptly made an oppropriation of three hundred dollars for the relief of the sufferers in that city, to which was as promptly voted five hundred dollars additional on the part of the Grand Lodge, to disburse which a committee was appointed, with instructions not to pass by any case of distress because its victims should not have special claims upon them as members of the order.

Outrage in France. An American Imprisoned.

Mr. Jacob Hundertfund, a respectable citizen of Newark, New Jersey,, went to Europe in company with his son, about a year ago, and was induced by his friends to take with him several letters to the wife and brother of Nicholas Metzger, sometime since arrested in New York as a fugutive from France, where he was charged with forgery. Hundertfund, who was a total stranger to Metzger, delivered them as requested, and arrived in Paris, on his return home, on the 2d of December last, when he was arrested and imprisoned. Notwithstanding his protestations of innocence and the interference of the American Minister, he was kept ten months confined among felons and murderers, as a kind of hostage for the delivery of the forger Metzger, whom he had never seen in his life. He has just returned to his family and friends in Newark.

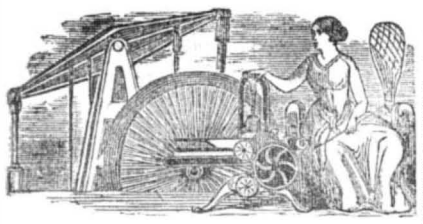
An association for cleaning clothes and boots has just been put in operation in Berlin. Employees of the society are stationed in more than thirty public places and great establishments in the city, who speedily put the costumes of the passengers in the streets into perfect order. The association has also set up an umbrella lending establishment. For the pledge of a Thaler (about seventy-five cents) any one can borrow an umbrella at any of the stations, and receive back his pledge on returning it, either where he borrowed it, or at any other station, on the payment of some five cents for a whole day's use, or a less sum for a shorter time.

A stranger passing through one of the mountainous towns of New England, inquired "What can you raise here?", The answer was, "our land is rough and poor: we can raise but very little produce, und so we build school houses and churches, and raise Men."

Missionaries and Rum.

The bark Catalpa, Capt. Watson, sailed on Wednesday last from Boston for Smyrna. She carried out a cargo consisting in part of 30,000 *gallons of rum*. Several missionaries, under the direction of the American Board, and destined for the Syrian Mission, departed in the same vessel.

© 1848 SCIENTIFIC AMERICIAN, INC



New Inventions.

West and Thompson's Clasp Coupling Joint.

This is the name given to a new joint for uniting pipes together, invented by Messrs. West and Thompson of this city. We have examined it both without being tested and have seen it tested thoroughly, and we have been so favorably impressed with its evident merits and utility, as to have no hesitation in saying that it is one of the most valuable and important improvements of the day. We will in all likelihood be able to give our readers an engraving of it in a few weeks, and in the meantime the following description will at least convey to the minds of practical men, some idea of its construction. A flange is attached to the end of a pipe in the common way, having a face exactly like those in common use, either plain or grooved, but the outside, or exterior part of the flange is altogether different from any in common use or heretofore known. It is rounded or bevilled with no holes through it for bolting, but by putting the faces of the two flanges together each on a separate piece of pipe, there is a gradual swelling of the bevil from the outer edges of the flanges to the root of them, or close to the pipes. Over this comes the clasp, which is concave inside, snd wraps over the outside, or convex of the flanges. This clasp is divided into two parts (but can be made of as many as will be most convenient.) Each part has two rounded knobs or projections with a hole in each for a screw bolt to pass through, and the clasp fits to the bevil of the flanges in its curve. There is a small space left between the meeting of the knobs or projections, for the purpose of screwup the bolts, so that an immense power is exerted in squeezing the flanges together and thus it forms the most perfect joint for a steam pipe yet invented, as the lever power exerted in screwing up by the bolts and acting thereby on the incline of the flanges conduce to make it just as tight as any person chooses. One of these joints can now be seen under a fair test at the Methodist Book Concern in Mulberry street, this city, and it far surpasses all the old joints in tightness, while it is not above one half of the weight, and four of them can be put up in the connection of pipes in the same time that it will take to put up one of the old kind. It is very neat and simple—one of Nature's joints- and in a short time it will no doubt be the only joint used for connecting steam pipes. Robert L. Stevens, Esq. has seen it and spoken highly of it and John Clark, Esq., the well known Steamboat Inspector, considers it one of the most valuable mechanical improvements. Engineers have spoken highly of it to us, and our opinion is the same as that of all others who have seen it in operation. The inventors have applied for a patent, which will be granted in due time, and in the meantime, from its simplicity and cheapness, it will be fast winning its way into general use.

Another Improved Printing Press.

We have seen it stated in more than one of our city papers, that Mr. William Heaton of New York, has invented a printing press, which it is said is calculated to print off eight sheets in a single revolution of the cylinders, taking an impression on both sides of each sheet. The number of sheets which it is estimated that it will print in an hour, is not less than twenty thousand. The wear of the types is also said to be diminished by the invention.

We cannot say anything to throw light upon the above notice of such a wonderful press, more than that it appears to claim too much superiority. We are doubtful of the ability of any press to print three hundred and thirty-three sheets in one minute, which this press must do to print twenty thousand sheets in one hour.

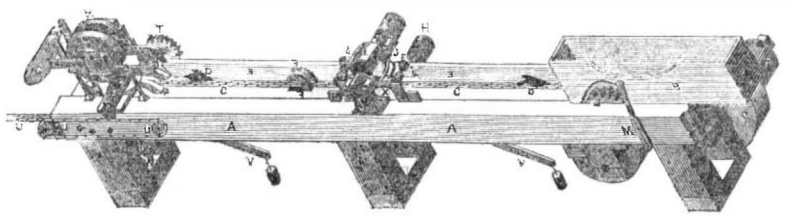
Electrical Precipitation.

Mr. A. Crosse of Broomfield, (Eng.) has recently enrolled a patent for improvements in heating fermentable and other liquids, so as to cause impurities or matters to be extracted or precipitated. The means proposed are electric currents generated from zinc and iron in water, in porus cylinders, passing through wine, cider, beer, &c.; through the first two during, but through the latter after fermentation. Also through sea-water, after having been once distilled, to purify it. From the use of electric currents in fermentable liquids the patentee says, much benefit may be derived, and it is the application of electricity to fermentable, fermented, and other liquids, for the purpose of extracting and precipitating other impurities and other matters, Mr. Crosse claims.

New Railroad Brake.

Mr. G. Stevenson of England, has invented a Brake which is a self-acting apparatus connected with the buffers by means of a rod or bar, around which a spiral spring is wound. Both rod and spring are attached to a perpendicular lever or beam, affixed to the customary brake. The effect is instantaneous. The stoppage of the locomotive, as it is known to every body, causes the buffer to press inwards the beam or lever connected thereto, pressing up the the break, and clasping both wheels at one end and the same time, upon every carriage throughout the train simultaneously, The stoppage of the entire train is effected in a very much shorter space. The invention is simple and effective; and Mr. Stephenson with great liberality has thrown it open for the benefit of the public.

LAW'S PATENT STAVE DRESSER.



This is an engraving of a Stave Dressing Machine invented by Mr. H. Law, of Wilmington, N. C., and which has been highly spoken of, but as the following description will explain its different parts, it will speak better for itself than all we can say respecting it, making an apology for a mistake of the engraver in making some of the letters to read backwards.

A A is the frame. B, is the hopper or box to receive the stave. C C, the endless chain. D D D, the dogs or hooks to carry forward the stave. E E, are guide boards. F F, are adjustable levers to support the stave. O, weight. H H, roller above second set of cutters. I, pulley. H, guide pulley to drive cutter heads. J J, pedestal and journal boxes for first cutter head shaft. K K K, frame that supports short chain and roller H H. L, wheel to feed geer. M, lever to throw out of geer. N, feed shaft pulley. O, pulley to carry cutter heads. P, driving pulley to the machine. Q Q, levers pressing stave away from cutters. R R, (only one seen) levers, also pressing stave away the cutters. S, wheel to carry short chain. T, long toothed wheel, meshing into another larger long toothed wheel, on the chain shaft below, said larger wheel is hid from view by the guide board. U U U, endless chain, carried by the long chain shaft to connect with the Jointer, as seen at the ends of the two machines, say at U and J. V V, weighted levers. W, spiral springs to R; one only is seen. X, raised roller under first set of cutters. Figures—1, first cutter head. 2, second cutter head. 3, 3, first pair of weighted rollers. 4, 4, second pair of rollers.

OPERATION.—The staves are placed or piled flatways in the hopper B, and are taken out one by one by a dog, on a short chain in the bottom of the hopper, which does not appear in the engraving. This dog is so formed that it reaches up and takes hold of a stave of any shape and can in no case take but one at a time. It carries the stave out of the hopper under a pair of springs (not seen in the engraving,) which springs keep back the remainder of the staves, allowing but one to pass, and leave the stave on the floor of the machine; a dog on the main chain takes it and carries it under the first set of cutters and under the two pair of weighted rollers 3 3, and 4 4, but over the raised roller X, that is to say, the stave passes between the revolving cutters and the roller X; the weighted rollers press the stave away from the cutters on to the roller X, which being raised about 3 inches above the floor of the machine affords to the stave the only support against the action of the weighted rollers, and consequently *must* come to a solid bearing on that roller no matter how twisted or crooked the stave, and the cutters revolving above reduces the stave to a uniform thickness. The levers F F, are thrown up by a light weight and readily adjust themselves to the passage of any shaped stave, working loose until the stave is about to leave the weighted rollers 3 3, when they are thrown into gear by one of the dogs passing through a throat under the floor of the machine and forcing out a lever, when F F become stationary and afford a sure support to the stave until it gets clear of the cutters, when F F become loose again and allow the stave to pass freely and continuously on, over the second set of revolving cutters and over the levers Q Q, and R R; the first dog carries the stave nearly up to the cutters where the dog on the short chain travelling faster than the first dog comes round in the proper time, and takes away the stave from the first dog and carries it out of the machine. The levers Q Q and R R, press the stave away from the cutters against rollers H, upon the same principle as the first operation. A simple weight G, bears upon the end of the stave to keep it from tilting into the cutters, as the other end leaves Q Q. The circumference of roller H, describes the length of the stave; it is eccentric and runs freely with the lever side weighted down; therefore the stave always enters with the lean part down—as it progresses to the middle, the full part of the roller is down—as the stave leaves the roller the lean part is again down, dressing the stave with thick ends and thinner in the middle, after the manner of coopers.

An application has been made to secure a patent.

Improved Candlewicks.

An improved candle may be made by the steeping cotton wicks in lime water, in which a considerable quantity of saltpetre (nitre) has been dissolved. By this means is obtained a pure flame and a superior light; a more perfect combustion is ensured, snuffing is rendered nearly as superfluous as in wax lights; and the candles thus made do not run nor waste. The wicks should be thoroughly dry before they are covered with tallow, otherwise they will not burn with a uniform and clear light. —*American Agriculturist.*

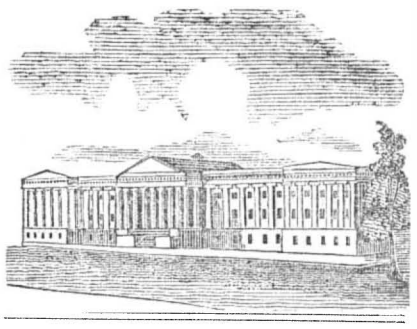
Candlewicks should always be smooth in fibre and bleached and by a fair experiment they are better without the saltpetre than with it. The lime however, is an improvement.

Strange Patent.

A patent has been taken out in England for making paper for the building of houses, bridges, ships, boats, and all sorts of wheel carriages, chairs, tables, bookcases, either entirely of paper, or to cover wood and iron with sail paper.

A Furnace Chilled.

We learn from the Boonsboro' Odd Fellow, that the stack in the furnace at Antietam Iron works, in that county, is now in a bad fix, in consequence of which the furnace is entirely stopped. By some misfortune, a very heavy blast became chilled and there it now remains a tremendous mass of cold iron. Efforts have been made to chisel it out, but it is feared the stack will have to come down before it can be removed.



LIST OF PATENTS

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending Dec 28, 1847.

To Jean Le Doyen, of Paris, France, for improvement in Disinfecting Compounds.—Patented Dec. 24, 1847. Date of Foreign Patent Oct. 8, 1844.

To John Watson, of Kingston, Jamaica, for improvement in Cleaning Filters. Patented Dec. 24, 1847. Date of Foreign Patent April 27, 1847.

To E. J. McCarthy, of Saugerties, N. Y., for improvement in Paddle Wheels. Patented Dec 24, 1847.

To William J. Brainard, of Hamilton, N. Y., for improvement in Fences. Patented Dec 24, 1847.

To Thomas J. Hubbard, of Hamilton, N. Y. for improvement in Fences. Patented Dec. 24, 1847.

To Andrew D. Brown, of New York City, for improvement in Harness Saddles. Patented Dec. 24, 1847.

INVENTOR'S CLAIMS.

Carriage Brakes.

By Christian Stoner, of Gettysburg Pa., Improvement in Apparatus for operating Carriage brakes. Patented 28th August, 1847. Claim.—What I claim as my invention and desire to secure by letters patent is: 1st, The manner of retarding carriages in descending hills by the combination of the crossed levers, cranks, parallel connecting rods, springs, arranged and operated in the manner and for the purpose above set forth. 2d, I likewise claim making the rod to retain its central position beneath the pole or perch and tongue, whilst turning the carriage in the manner described, by having an oblong link formed in it at the coupling bolt in the manner above set forth by the combination of the triangular plates I, and short rods.

Preparing Wool and Cotton.

By George L. Mason, of Willston. Improvement in preparing wool and cotton for carding. Patented 4th September, 1847 Claim—what I claim as my invention and desire to secure by Letters Patent, is the application of heat and moisture by means of steam. to cotton, wool, and other material, preparatory to carding and manufacturing.

Mattresses and Cushions.

By Charles Lewis Fleischmann, of Washington, D.C. Improvement in making mattresses, cushions, &c. Patented 4th September 1847. Claim.—What I claim as my invention and desire to secure by Letters Patent is, First, placing between layers of horse hair, moss, or any of the specified materials, layers of cotton batting either confined between cloth, paper or any suitable fabric, or cotton batting, glazed on both sides, or simply calendered, as above described. Second, the mode of making mattresses suitable for winter and summer use, substantially as herein described.

Making Sugar.

By Antonie Maria Felix Chevt, of the Parish of St. James, La. Improvement in making sugar. Patented 4th September, 1847. Claim. What I claim as my invention is the employment of soluble sacharate of lime, instead of the lime in its native state, and the employment of an agent which may take off the lime after its action, without having any thing soluble in the sacharine liquor,

Seven thousand three hundred and seventeen Mexican bounty land warrants, for 150 acres each, have been issued, and 1120 for 40 acres,—in all, 1,139,800 acres of which only 3,520 have been located. A land warrant is worth $125 at Washington, and as good as $200 in specie to the Western buyer.

© 1848 SCIENTIFIC AMERICIAN, INC

NEW YORK, JANUARY 8, 1848

The Past and the Future.

The man who never looks within, seldom looks wisely without. It is one of the most profitable studies of a man, to scrutinize his heart—to examine into the well-spring of those actions that emanate from the volition of our mind, and to ponder well upon their effects. If we perceive that a love to benefit our country or our fellow man, has not especially been at the root of all our actions, we ought seriously to pause, reflect, resolve upon and act differently for the future. This is the duty of every man, and there is no better time to do this then when we are standing at the vestibule of a New Year. Then before we enter seriously to explore the distant scene of future hope, or future fears—the *chiara oscura* of our future life—let us at least have the calm and soothing consolation to lay to our hearts, that whatever winds may fill the sails of our bark, those of prosperity or adversity, (for onwards we must float,) we at least shall be true to ourselves, by being faithful to our Creator, and honest to our fellow man. No class of men have more need to examine their hearts oftener than those who are at the helm of the public press, each in his own sphere. Junius hath said, that "the press is the palladium of our liberties," and this beautiful comparison implies that the Press sits as a goddess of wisdom to watch over our destinies.—It is therefore the duty of every editor who is true to liberty, personal and national, to disseminate true knowledge, that is, to be guided by truth as the mariner is guided by that star which fails not to tell his course, though the magnet may lose its charm. It has always been our sincere desire to propagate useful knowledge, and we have always endeavored to collect and condense as much practical information for the benefit of our readers as possible.

The great triumph of modern over ancient civilization, is the invention of printing. The press collects the gold and silver of a thousand minds and daily and weekly spreads before its readers the treasures of those mines, more rich than Potosi's and more valuable than those of Peru. In looking back upon the past we think that we have "done the State some service" during the past year. We have brought into public notice some things which will yet be a great service to science and to our country. We have during the past year presented our readers with much real practical information—information plain and tangible, not merely theoretic and speculative. Our articles on the Gutta Percha, a substance which is now beginning to be generally used and known and which is yet designed to work a revolution in the arts, were all practical and derived from no less than six specifications of inventions taken out for its different uses. Our articles on Electrotype Manipulation, were all practical also, derived from no less than the specifications of five patents and much information otherwise obtained. In short, we have presented to our readers during the past year, a greater amount and variety of sound and condensed useful information through the columns of the Scientific American, than can be found in any other periodical whatever, and we are happy to say that we have met with much to cheer and encourage us to renewed efforts in the same cause for the future. It has been a great pleasure for us to correspond so extensively, as we have done with our numerous subscribers. In every single case a familiar friendship has been established. We believe that almost all the patentees in the United States are among the list of our subscribers, and they are now all fully aware of the great fact, that to publish a description of their inventions in the Scientific American is the best manner to bring said inventions into notice, and that the opinion of any committee or association upon the merits or demerits of any invention, to influence public opinion, is now a thing obsolete An engraving and description of an invention published in a popular scientific paper, presents said invention to the public arbitration and it is generally the most correct, certainly the most final.

We are indebted to many of our subscribers for much sound and practical information, many of them men of no mean fame, and from many plain and practical working men we have received a vast amount of practical every day useful knowledge. These friends will be, we are certain, as generous and zealous for the benefit of science for the future as they have been in the past, and as we journey onward down the stream of time, we trust to be growing both wiser and better.

Interesting Patent Case.---Suit for Infringement of a Patent.

An interesting case was lately tried in the U. S. District Court at Boston, for an alleged infringement of a patent for a machine for grinding Spiral Knives or Cutters. The plaintiff was William Hovey, the defendant Silas Stevens. Letters patent were obtained in September, 1845, and in May, 1846, a bill was filed for an injunction on the defendant to prevent him from using the patented machine — At the hearing of the injunction, the defendant exhibited proof that the said machine for grinding knives had been long known in principle and used for shearing cloth, so an injunction was then refused until the patentee should establish the validity of his patent by suit at law. In November, 1846, a trial took place between the parties before Judge Sprague when the plaintiff was nonsuited on the ground of a defect in the specification. The plaintiff then surrendered his patent and obtained new letters patent in the month of June last, which disclaimed several parts of his machine which was claimed in his first patent. The present action commenced early in last July, and damages were claimed for using the machine from June 19th, 1847.

The defence set up was, that the plaintiff was not the original inventor of the machine patented, and that the defendant had made it and used it before said Hovey applied for a patent in 1845, and that by the Act of March 3, 1839, Sec. 7, he had a right to use the machine even admitting the validity of Hovey's patent. On the first ground of defence, the defendant having filed a specification in pursuance of the Act of July 4, 1846, the Court decided that defendant is only required to give the names and places of residence of those whom he intends to prove to have possessed a prior knowledge of the thing, and that the fact of prior knowledge may be proved by competent witnesses. The defendant introduced a machine used at Hoosick, N. Y. for thirty years past, which he contended was substantially the machine claimed in the plaintiff's specification. The plaintiff insisted that he claimed and patented a machine, in which the face of the knife when grinding should radiate from the axis of the stock on which it is ground, and the flange on the grinder to which the knife is attached must be a duplicate of the flange on the cylinder to which the knife is transferred for use ; and that this was not the case with the Hoosick machine. The plaintiff uses his machine for grinding knives for a straw cutter of which he is patentee. In this straw cutter the plane of the knife radiates from the centre of the cylinder on which it is placed, or nearly so, and in his grinder the knife does the same. In his specification the plaintiff claims a machine that shall grind a knife so as to cut on *his* straw cutter. But the defendant contended that the plaintiff not only claimed a machine that would grind a knife so as to cut on *his* straw cutter, but one that would so grind a knife, that when transferred, it would generate a cylinder, and cut on a roller,—any roller,—not confining it to the plaintiff's straw cutter ; and that the Hoosick machine would produce the latter result. That if the plaintiff was confined to a knife that would cut on *his* straw cutter, he had not sufficiently described his invention in his specification ; for he was bound so to describe his machine, that the public could understand it without reference to *his* straw cutter, with which the law does not presume the public to be familiar.—The witnesses on both sides generally agreed that a knife ground out of radius (quarter of a circle) if transferred and placed in the same relative position, would generate a cylinder and cut on a roller.

To meet the second ground of defence, the plaintiff offered evidence to show that the defendant copied the machine constructed by him, from the plaintiff's, and contended that if such was the case, it was against his rights, and the defendant was not protected by the act of 1839. The defendant contended that the Act contemplated just such a case ; that it pre-supposed the patentee to be the first and original inventor of the thing patented ; for if he were not, then his patent would be void, and the defendant would require no protection ; that it pre-supposed the defendant to have his machine without the consent of the patentee, for if with his consent, that was sufficient protection ; that it was intended to quicken the inventor to diligence in procuring his patent, so that he might not keep it from the public 16 instead of 14 years.

Judge Sprague charged the jury that the plaintiff in his specification claimed a combination that would produce certain results, viz. 1. The grinding of a knife to a chisel edge, so that it would cut by pressure on the roller of *his* straw cutter, on a radius or nearly so. 2. The grinding af a knife, that, when transferred to its cutting place, would generate a cylinder, and cut on *a* roller, any roller rather than the plaintiff's ; that if the latter result had been produced by the Hoosick machine, and by the same mechanical means, though it might not produce the first result, then the plaintiff claimed too much and could not sustain his action ; that the question was, whether a machine used long before the plaintiff's application for a patent, would by substantially the same mechanical means, produce the result described in his specification ; not whether there existed a machine previously in which the knife was ground in a radius.

On the second point the Judge held that if the defendant copied his machine from the plaintiff, without his consent, and put it in use against his will, he was not protected by the statute, but reserved this point for consideration, in case a verdict should be returned for plaintiff.

On the ninth day from the commencement of trial the jury were discharged, not being able to agree upon a verdict.

For the Scientific American.

Lead Pumps and Pipes.

There is a great danger to be apprehended from the use of lead pipes for conducting water to be used in drinking or cooking. It is well known that lead is poisonous, and if taken inwardly is the cause of disease if taken in small quantities, and if taken in large quantities is the cause of death. Lead however, is an insiduous poison. It may be taken in so small quantities that no effect either good or bad may be perceived or felt for a long time, but if taken regularly, let the quantity be ever so minute, disease will be sure to follow from its effects, and ultimately death. Thus if water is conveyed through lead pipes, and said water be in the least corrosive it is dangerous to use If water be exposed so as leaves or any vegetable substance get into it, never use lead pipes to convey it for domestic use. In fact lead pipes are not safe for domestic purposes, unless for conveying filtered rain water. Those who have lead pumps or lead pipes in their pumps should never use the first four or five discharges made by the pump, especially, if none has been drawn from the well or cistern for any length of time, such as in the morning when the pump has not been touched all night. G. R.

Bread Making.

Dr. H. B. Lewis, of this city, has published a small tract upon Bread making, a copy of which is before us. We heartily recommend it to the attention of all families. Dr. Lewis says that in one barrel of flour, by the process of effervescence, in comparison with fermentation, that there is a saving of thirty three pounds. Of this we have no doubt, although we believe, from experiments which we have seen made, that the fermented bread is, what is technically called, lighter, more spongy. The gas developed by fermentation is carbonic, therefore it is recommended that bi-carbonate of soda and muriatic acid be used to develope this gas in the making of bread, by the mixing of these substances together. The following are the recommended proportions : For 3 lbs. fine flour 9 drachms of bicarbonate of soda mixed with the flour in cold water, the soda to be dissolved first in a little milk warm water, muriatic acid 11 1-2 drachms, and water in proper kneading quantity, about 1 3-4 lbs There is no use in adding salt in making bread in this manner, as the combination of muriatic acid with soda forms common salt—the muriate of soda.—The little pamphlet of Dr. Lewis should be in the hands of every housewife, as it reveals much domestic chemical knowledge, and Sir Humphrey David once said "every good wife that boils a kettle or a pan, would be all the better of drinking at the fountain of chemical knowledge"

An Important Suit.

The N. O. Delta says that the cities of Philadelphia and New Orleans as legates of the late Stephen Girard, are claiming from the United States a tract of upwards of 200,000 acres of land, lying within the limits of the celebrated Bastrop grant, in the Ouachito region of Louisiana, and held under the primitive title, conferred on the Baron de Bastrop, in 1796, by the Spanish Government The United States rest their title and right of domain to the contested lands upon the treaty of Paris in 1803, by which Louisiana, with all lands and possessions not already granted to individuals, was transferred to the United States.

Sentence of an Engineer.

Henry Robert Haisman, the engineer of the steamboat Cricket, which blew up some time ago at London, has been found guilty of manslaughter. His sentence was a mild one, only two months imprisonment, without hard labor. He was very ignorant it seems, and his employers were the most culpable, for which reasons he was recommended to the merciful consideration of judge and jury.

Stone Docks.

The Secretary of the Navy in a report to the House of Representatives recommends the construction of stone docks in preference to kinds of floating docks, and suggests the propriety of building such at Pensacola, Portsmouth, and Philadelphia, upon the Act of last Congress, which directed the construction of new docks at those places.

Brooklyn Flour Mills.

The Union Mill at Brooklyn, makes about fifteen hundred barrels of the best flour per week, and the Brooklyn City Mills about 1200 barrels These mills are propelled by steam power and are as profitable as any that are driven by water power.

Population of Liverpool.

The population of the city of Liverpool, England is 358,855 and a revenue of $1,366,967. Twenty thousand eight hundred vessels entered and left that port last year.

Scientific American---Bound Volumes.

The second volume of the Scientific American, bound in a superb manner, containing 416 pages choice reading matter, a list of all the patents granted at the United States Patent Office during the year, and illustrated with over 300 beautiful descriptive engravings of new and improved machines, for sale at this office—Price $2,75. The volume may also be had in sheets, in suitable form for mailing—at $2.

The back Nos. of the present volume may also be had upon application at the office.

THE
SCIENTIFIC AMERICAN.

Persons wishing to subscribe for this paper have only to enclose the amount in a letter directed (post paid) to

MUNN & COMPANY,

Publishers of the Scientific American, New York City

TERMS.—$2 a year; ONE DOLLAR IN ADVANCE—the remainder in 6 months.

Postmasters are respectfully requested to receive subscriptions for this Paper, to whom a discount of 25 per cent will be allowed.

Any person sending us 4 subscribers for 6 months, shall receive a copy of the paper for the same length of time

© 1848 SCIENTIFIC AMERICIAN, INC

FORMIGN PATENT LAWS.

(Concluded from No. 15)

BAVARIA.

The Bavarian Government grants patents both of importation and invention, either to citizens or aliens, for from two to fifteen years, and may be prolonged at pleasure. A system which enables the patentee to throw up his patent at any time when he may deem it expedient to do so.

The changes depend much upon circumstances, but may be generally calculated at about $7 per annum for the number of years for which a patent is taken.

The object of a patent must be new, and never before described in any printed publication.

Patents of addition for improvements are not granted, but new patents must in such case be taken out.

The patent must be set in activity within two years from its issue.

SAXONY.

The government of this country exercises its discretion in limiting the term for which a patent shall be granted.

The charge payable to government on the issue of a patent, usually ranges from $4,80, to ten times that sum.

The subject of the patent must be new, and must not have been described in any printed publication.

Improvements on the patent originally granted may be secured by new patents only.

The subject of the patent must be put in operation in one year from the grant.

The patent must be granted *nominally* at least, to a resident.

WURTEMBERG.

The Wurtemburg government grants patents to all persons whether natives or foreigners; whether of importation or invention.

This government does not grant patents of importation for a longer term than 10 years; but the Legislature sometimes passes a special act for that purpose.

A patent may be procured for a term shorter than 10 years and afterwards prolonged.

The charge for a patent is payable by an annual instalment of from $2,40 to $9,60, or thereabouts.

The subject of the patent must be new and never have been divulged in any printed work.

Patents of addition are granted, and the object of the patent must be set in activity within two years from the grant and not neglected at any one time for the term of two years.

SARDINIA.

The Sardinian Government grants patents both of invention and importation to any application, for a term limited by its discretion, but usually fixed at 6, 8 or 10 years.

The charges are moderate, varying with circumstances.

A patent of addition, as such, cannot be obtained, and the government fixes the period within which the object of the patent must be set in operation.

THE ROMAN STATES.

The Patent Laws of the Roman States are well considered and liberal.

The Roman government grants patents of invention and importation to applicants whether natives or aliens, for from five to fifteen years, if the subjects of them nave been already patented in the countries whence they are imported, but if the subject of the privilege solicitedhas not been patented elsewhere the Roman Government will issue a patent for five years only.

The tax is ten Roman crowns a year, or about $10 27, for patents of invention, and fifteen Roman crowns, or about $15 13, for patents of importation.

No patent of addition will be granted in this country, so that if an improvement be made on the original, a new patent must be demanded.

A patent right must be put in activity within 12 months of the grant, and may not be suspended at any time for 12 months.

The term for which the patent is issued is sometimes prolonged.

If no opposition to the patent be made in 6 months of the grant, none can be afterwards admitted on the ground of want of novelty, or priority of claim.

SPAIN.

The Government of Spain issues patents of invention for 5, 10 or 15 years, at the desire of the petitioner, and patents of importation for 5 years

A patent originally granted for 5 years may be prolonged to 10 years, if sufficient cause be shown; but if the original patent were granted for 10 years it cannot be prolonged.

Patents are granted either to foreigners or natives.

The government charges for patents of invention in Spain, are :—For 5 years 1000 reals or about $50. For 10 years 3000 reals or about $150. For 15 years 6000 reals or about $300.

For patents of importation in Spain the charges are 3000 reals for a patent of 5 years only.

The law is silent respecting patents of addition for improvements.

A patent in Spainmust be put in activity within a year and a day from the day of its date, and its operation must not be suspended at any one time for a year and a day on penalty of its forfeiture.

PORTUGAL.

The Portuguese government grants patents of invention both to citizens and foreigners, from 1 to 15 years, at the option of the applicant.

To patentees who may have previously obtained patents in a foreign country a patent may be granted only for such term as shall make up 15 years.

The amount to be paid for a patent is about 3200 rees or $4,56 per annum.

The charge being so slight, in case of improvement upon the subject of the patent, new patents are usually taken out and not patents of addition.

A patent must be set in activity within the first half year of its term, and the terms of patents cannot be prolonged.

SWEDEN.

The Swedish government grants patents of 15 years for inventions; and for an improvement on an invention, patents of 10 years; but it grants patents of importation for five years only. The term last mentioned however may for sufficient cause be extended.

Although the Swedish government issues patents in the first instance without regard to the nationality of applicants, yet if they be foreigners it will be necessary within twelve months from the issuing of the patent, to appoint some respectable resident, in whose name it may be placed.

The Swedish government makes no charge for the issue of the patent, but requires the publication of the specification in the Government papers at full length, three different times within 60 days from the grant of the patent.

The object of the patent must be new, and must not have been published in any printed work previous to the delivery of the patent.

A patent of addition is in all respects subject to the same formalities as those prescribed for original patents.

Within two years from the date of the patent, the patentee must prove to the satisfaction of the College of Commerce, that the object of his patent is in activity. This period is for good cause sometimes extended. After the expiration of the term limited for putting the patent in activity, the proof to which reference is made above must be furnished to the College annually.

If within 6 months from the date of the third publication of the specification no person opposes the patent, it is established, and no later opposition will succeed.

It must not be overlooked in examining the Patent Laws of the Governments united under the Zollverein, that the laws have been in some respects modified by the Articles of that Association, and especially by the following provision :—A patent will not authorise

1. The importing of objects similar to those for which the patent has been granted.
2. The restriction of the sale of the same.
3. Or of the use of similar objects not bought of the patentee; but there will be an exception in favor of machines, mechanism, or instruments and manufactures.

The above valuable digest of foreign Patent Laws, was arranged for the Scientific American by Francis O. Dorr Esq., Wall st, New York.

For the Scientific American

Exiles in Siberia.

The exile from Poland to Siberia of a great number of Poles of all ranks has caused during the last few years, much notice to be taken of the Russian New South Wales; and as usual, with much truth, the public voice has mingled not a little of mere fable. We borrow some facts from Kotzebuc and other eminent writers calculated to give a somewhat just notice of what Siberia really is.

It is generally supposed that slavery and suffering are inflicted alike on all who are sent to Siberia; but save the evil inherent, in and inseparable from compelled expatriation, many of the exiles are in no worse position than if at home in their own land.

This class of exiles consist for the most part of iudividuals of the higher order, condemned for political offences not sufficiently heinous to merit capital punishment, but sufficiently so to render their exile necessary to the peace of their country, No oppressive or infamous punishment is inflicted upon exiles of this class. A residence is assigned them; and while those who have property of their own are allowed to enjoy it in peace, those who have none receive a small but sufficient pecuniary allowance from the Government. Exiles of this class if nobles, are not even deprived of their rank.

The terrible sufferings and cruelty with which we are accustomed to associate our thoughts of Siberia, are inflicted upon two very different classes of exiles from those we have spoken of.

The first of these two consists of Russians, who have been convicted of the most atrocious offences, and who have been sentenced to Siberia after having been subjected to that most horrible punishment the knout. It is only after being convicted of the most heinous offences such as but a very few years ago, our own laws would have punished capitally, and after the senate has inquired into the case and confirmed the sentence that prisoners are placed in this class of exiles. When sentenced after having corporal punishment, if awarded to them, they are driven chained, and with bare feet, to the dreary mines of Nertschinck, whence it is rare indeed for one of them to be liberated. The lot of this class of exiles is more horrible than even death itself; but it is an error to suppose the same treatment to be applied to all without distinction.

So far is this from being the case that as we have said above, there is a third class. This, like the one we have just now described, consists of persons who have been convicted of infamous crimes, but not of quite so heinous a character. These are in a pretty similar position to the convicts in New South Wales, being distributed among the free inhabitants as bond servants. The necessary time, however, is allowed them to earn if they choose to be diligent sufficient means to purchase many comforts, and thus, though their punishment is sufficient in itself it is small in comparison with that which is inflicted upon the doomed and suffering who drag out their existence in the gloomy depths of the mines of Nertschinck. Siberia is now filled with expatriated Poles the descendants of the oldest republic in Europe, the children of the Jagellons who once rioted in the conquered palaces of Moscow, but are now the serfs, the bondsmen and bondwomen of an autocrat whose forefathers were but petty Dukes, who trembled at the mention of Poland's wrath. Immediate conquest is no sign of long prosperity Virtue and union would have saved Poland, but even after the great victory of Vienna won by John Sobieski, he looked on the contentions of his countrymen with a sadly though prophetic eye, and exclaimed, "yet forty years and Poland is no more."

A Just Minister.

When Sir Thomas Moore was Lord Chancellor of England, he ordered a gentleman to pay a sum of money to a poor woman whom he had wronged. The gentleman said, "I hope your lordship will grant me a long day to pay it." "I will grant you your motion," said the Chancellor. "Next Monday is St. Barnabas day, the longest day in the year; pay the woman on that day or I will commit you to prison."

Submerged Wind Propeller.

An English engineer has invented and at his own expense fitted up one of his Propellers and tested it on the Thames, where it performed on its first trip at the rate of 12 miles per hour. The invention is simply the application of the old fan-mill principle, the blowing machine acting upon the water as upon the air, simply by collecting it at the centre and throwing it off at the circumference of the vanes, from whence it impinges on the segment of a circle, placed so as to form a volute to the centre and by that mode to leave the opening in a strong current parallel to the sides of the vessel. This propeller has a case on each side of the vessel attached to it something like as if each case or cylinder was a reaction water wheel, but only the interior arrangement is different, as the blowing, or propelling vanes, are worked by bevel gearing attached to the main shaft. The first experiment was very successful, in comparison with those of our first steamboats, but this we think is more to be attributed to the perfection at which we have arrived in the construction of steam engines than to improvements in paddle, screw or blowing machines. Mr. T. B. Simpson is the name of the inventor of the above application, and for which he has taken out a patent in England. He is sanguine of success, but time and experience, we believe, will prove it to be rather inferior than superior to the common paddle system of propulsion.

A Tidal Mill Company.

A Tidal Mill Company has been formed in England, and have exhibited one of their machines on the river Thames, below the Southwark Bridge. It is a floating ark with a submerged wheel, which is operated on by the tide, and answers well for a sawing and planeing mill.

The following are the rates of power, and it will be seen that it can be applied very economically and very extensively on a great number of our rivers which are deemed to be perfectly useless in mechanical application.

Tides or currents miles per hour, 2, 3, 4, 5, 6.

Wheel 7 feet diameter, in the above ratio, working 2, 3, 4, 5, 6 horse power.

Wheel 14 feet diameter, 8, 12, 16, 20, 24 horse power.

A number of these wheels we believe are in use on the rivers of the Continent of Europe, and by having the circumference of the driving wheel of a thin band of iron, it carries a band that drives a pulley on the deck above

TO CORRESPONDENTS.

"S. T. H. of Mass."—Your improvements in the weaving loom so far as your imperfect sketch and drawing will allow us to judge, are original although of no great advantage, we would not advise you to be at the expense of making application for a patent, you are perhaps a better judge whether if would be profitable to yourself or not, but we deem it a duty to be honest in giving advice as we would not wish any person to expend money injudiciously.

"H. O. of N. Y."—There are differences of opinion regarding the Newtonian theory of light, and certainly we must not pretend to be in advance of more eminent men.

"S. T. of Ohio."—Look well to your honors.

"L. R. of Tenn."—We are glad you have made out so well with your bargain. We are are prepared to sell the right also for Miss. on reasonable terms. We have not the agency of any planing machine. John Gibson of Albany has the right of Woodworth's, and he is a nipper to come across in a law suit.

"W T. of N. Y."—Do not be ashamed of being poor. Remember the words of wisdom, "he that is diligent in business shall stand before princes."

"A. W. C. of N. Y."—The rotary steam engine that was experimented upon in a sloop of war at Chatham, England, and was a failure, was the invention of Lord Cochran, a well known inventor, Its peculiar construction is unknown to us. It broke down in a rough sea.

"W. M. B. of Skeaneatles,"—The manufacturers guide is a good book, but we recommended Ure's dictionary of manufacturers and

© 1848 SCIENTIFIC AMERICIAN, INC

arts; it is $5. We do not think that a rea plain, minute and simple work has yet been published.

"E. W. of Maine,"—We will obey your request next week.

"W. L. of N. J."—We shall answer next week

"E. B of Conn."—We shall favor your request as soon as possible. We were not aware that the revolving box was so old.

"E. I. P. of Pa."—We were led to commit the error, from the tone of your letter. We shall send you word by mail where to get the information regarding the English engine.

"J. P. of N. Y."—It is not possible to discriminate upon the best architectural work for your purpose. There are books on Architecture in this city from $1 up to $100. We would select the best for you according to the price you would desire to pay.

"W. L. of Ohio."—The Galvanic Battery deposits crystals of any salt, also metals from their solutions. A battery of charcoal and zinc plates will generate electric fluid for a long time, if only buried in the ground. No acid is used for this purpose. A perpetual battery is also made by dropping the acid on sand, surrounding the plates with the moist sand and thereby preventing their oxidisation. No benefit has resulted to agricultural science yet by the employment of electricity in the stimulation of vegetation.

"A. H. of Maine."—You shall hear from us by mail.

"R. C. of Mass."—We have answered you by mail.

"R. W. F. of Pa."—It would not be possible to secure a patent for your invention on account of the want of novelty.

"E. D. C. of Ct."—We shall be able to give you the plices of Gutta Percha next week.

On hand, a large pile of correspondence which cannot be answered but by mail. We would suggest the necessity of all our correspondents writing in a plain hand and in a brief, yet explicit manner. Some are too brief to be understood and others sometimes too lengthy. A careful review of a letter after it is written would be both a benefit to us and some of our worthy correspondents.

Valuable Mine.

A rich mine of plumbago (black lead,) has been opened in Jaffrey, N. H., at the foot of the Monadnock mountain. Six tons were brought down from Fitzwilliam on the Cheshire Rail Road last week. It brings about $75 per ton.

Patent Agency.

Applications for Patents made at this office, on the most reasonable terms. Neat drawings, specifications, and engravings of the first character, and cheaper than anywhere else. Notices of new inventions, Agency for the sale of Patent Rights, and all business of that nature, promptly attended to. Those who have patent rights to dispose of will find a good opportunity and field for their sale—such as Horse Power Machines and Waterwheels of every description. The largest circulation in the world for advertisements of inventions, &c.

GENERAL AGENTS

FOR THE SCIENTIFIC AMERICAN.

New York City,	Geo. Dexter.
Boston,	Messrs. Hotchkiss & Co.
Philadelphia,	Stokes & Brother.

LOCAL AGENTS.

Albany,	Peter Cook.
Baltimore, Md.,	S. Sands.
Bermuda Islands	Washington & Co.
Cabotville, Mass.,	E. F. Brown.
Concord, N. H.	Rufus Merrell.
Fall River, Mass.	Pope & Chace
Hartford, Ct.,	E. H. Bowers.
Houston, Texas,	J. W. Copes & Co.
Jamestown, N. Y.	E. Bishop.
Lynn, Mass,	J. E. F. Marsh.
Middletown, Ct.,	Wm. Woodward
Norwich, Ct.,	Safford & Parks.
New Haven, Ct.,	E. Downes.
New Bedford, Mass.,	S. F. Hoyt
Newburg, N. Y.	S. A. White.
Newark, N. J.,	J. L Agens.
Newark, N. J	Robert Kashaw.
Providence, R. I.,	H. & J. S. Rowe.
Rochester, N. Y.	D. M. Dewey.
Springfield, Mass,	Wm. B. Brocket.
Salem, Mass.,	L. Chandler.
Saco, Me.,	Isaac Crooker.
Savannah, Geo	John Caruthers.
Troy, N. Y.,	A. Smith.
Taunton, Mass.,	W. P. Seaver.
Utica, N. Y.	Cannieff & Co.
Williamsburgh,	J. C. Gander.
Dover, N. H.	D. L. Norris.

CITY CARRIERS.

Clark Selleck, Squire Selleck.

Persons residing in the city or Brooklyn, can have the paper left at their residences regularly, by sending their address to the office, 128 Fulton st., 2d floor.

Advertisements.

☞ This paper circulates in every State in the Union, and is seen principally by mechanics and manufacturers. Hence it may be considered the best medium of advertising, for those who import or manufacture machinery, mechanics tools, or such wares and materials as are generally used by those classes. The few advertisements in this paper are regarded with much more attention than those in closely printed dailies.

Advertisements are inserted in this paper at the ollowing rates:

One square, of eight lines one insertion,	$ 0 50
" " " " two do.,	75
" " " " three do.,	1 00
" " " " one month,	1 25
" " " " three do.,	3 75
" " " " six do.,	7 50
" " " " twelve do.,	15 00

TERMS:—CASH IN ADVANCE.

V. B. Palmer is duly authorized to receive Subscriptions and and a limited number of advertisements for the "Scientific American," in Philadelphia, Baltimore and Boston.

A GOOD INVESTMENT

FOR A PRACTICAL MAN WITH A MODERATE CAPITAL.

I HAVE a large well built three story house 40 feet square, situated on a stream that affords a column of water under a head of seven feet, of about 809 square inches four months in the year, about 400 ten months and 150 square inches all the year, with all the water power, wheels, &c necessary. Located 13 miles North-east of Memphis and 10 miles East of the Mississippi River, in Shelby county, Tennessee, which I wish to sell or rent or enter into a co-partnership with a worthy. energetic. honest man (none other need apply,) who understands the business, and who will furnish all the necessary machinery for starting a Cotton Factory. For such an establishment the location is said to be a very eligible one and of which I have no doubt. Any quantity of cotton in the seed can be had within one or two miles of the mill, and provisions in abundance cheaper than elsewhere in the Union. It is situated on the dividing line between the Cotton and Grain growing regions of the Mississippi Valley. I would start the factory myself but for my total ignorance of the business; therefore I want a sterling man of good character, who understands the business thoroughly and practically, to get the cotton machinery and either rent the site at $1000 a year, or purchase it at $3000, or enter into a partnership with me which I would prefer he furnishing all the machinery and I all the balance. I would propose commencing operations early in the spring or summer. The limit of this proposition shall be the 1st of March next.—Health of the country good.

j8 4t* S. S. REMBERT, Memphis, Tenn.

CHARLES M. KELLER,

ENGINEER AND ATTORNEY,

For procuring and defending Patents.

Office—No. 304 Broadway,

j1 3m* NEW YORK.

THEODORE F. ENGELBRECHT,

INVENTOR OF THE IMPROVED

Patent Sockdologer Fish Hook,

Office—No. 79 John Street, New York.

T. F. E. devotes particular attention to introducing and selling Patent Rights, or Manufactured Patent Articles throughout the United States and Europe, and flatters himself that he is eminently successful. Patentees and Inventors are invited to call.

References.—Munn & Co. Scientific American, New York; Kingsley & Pirrson, Eureka, New York; W. H. Starr, Farmer & Mechanic, New York; S. Nichols, Editor Sunday Mercury, New York; Williamson & Burns, Sunday Dispatch, New York; Edmund Morris, Editor Gazette, Burlington, N. J.; J. B. & P. Kunkle, corner of Garden and Willow sts., Philadelphia; John Hancock, Editor Mirror of Patent Office, Washington, D. C, d25 3m*

Magnificent Portrait of General Taylor.

☞ We have a few thousand left, which we will dispose of at 25 dollars per thousand, 3 dollars per hundred, or 4 cents singly, or 30 copies for one dollar. They may be forwarded by mail. Address at this office. d25

Gold! Gold!!

☞ Who will not buy a Gold Pen, when they can be obtained with a silver case for $1,25! They can be had at this office for that price. d25

Lamps, Chandeliers,

CANDELABRA, GIRANDOLES, RICH CHINA AND BOHEMIAN GLASS VASES, HALL LANTERNS, &c.

Dietz, Brother & Co.

Washington Stores, No. 139 William street, New York, (one door south of William st.)

ARE manufacturing and have always on hand, a full assortment of articles in their line, of the following description. which they will sell at wholesale or retail at low prices, for cash:

Solar Lamps—Gilt, Bronze and Silvered, in great variety.

Suspending Solar Lamps, gilt and bronzed.

Bracket do do do

Side do do do

Solar Chandeliers, do do 2, 3 4 and 6 lights.

Camphene Suspending Lamps, gilt and bronzed.

do Bracket do do

do Chandeliers do do 2, 3, 4 and 6 lights.

Girandoles—Gilt, silvered and bronzed, various pa ...s.

Candelabras do do do ...

China Vases and Bohemian Glass Vases do

Hall Lanterns, a large assortment, plain and c...

do with stained and Bohemia ... Glass Lights.

Lamp Wicks, Chimneys and Shades of all ...

Paper Shades, a large assortment of ... kinds. and styles. ...w patterns

OILS—Sperm, Whale and Lard, of th...

Superior Camphene and Burning Flu... best quality.

November 29, 1847. ...

d18 6m

Holden's Dollar Magazine,

Containg 64 pages of Reading Matter!, At the astonishing low price of

ONE DOLLAR PER ANNUM! OR SIX COPIES FOR FIVE DOLLARS!

IT contains at least one third more reading matter than any similar publication in the United States, and is decidedly the largest, cheapest and most desirable Magazines ever published in this or any other country! The contents of Holden's Dollar Magazine will consist of

Tales, Essays, Sketches and Translations.

from the pens of some of our first authors, including a series of well-wrought and spirited sketches illustrative of incidents connected with the history of the Union; arrangements having been made to elucidate some useful Historical Reminiscence in every tale produced. The other usual features of a first class Magazine will be incorporated in the "Dollar," which, with its vast capacity, sixty-four pages, will enable the publisher to avail himself of many of the best writers on the other side of the Atlantic—he being pledged to render Holden's Dollar Magazine the best as well as the cheapest literary enterprise ever undertaken.

Who will not subscribe?—Among the writers of acknowledged talent in this country who are already engaged for the "Dollar Magazine," are those of Major M. M. Noah, C. F. Briggs, (Harry Franco of the Knickerbocker,) Rufus W. Griswold, B. Constable, T. W. Meighan, author of the "Revolutionary Sketches," "Legends of the Thirteen Colonies," and together with the names of many other of our most distinguished authors who will furnish occasional notices peculiar to this Magazine.

Each number will contain a long and thorough review of the principal topics of the month, interspersed with anecdotes, oddities and gossip upon various subjects, which cannot fail of proving instructive as well as amusing. This will be served up monthly by one of the best humurous authors of the day, and will be a feature alone worth more than the subscription price. In the course of the volume, articles will be given from the pens of nearly all the following European authors, viz: Douglas Jerrold, Gilbert Abbott A'Becket, Goodwin Barmby, William Howitt, S. C. Hall, W. W. Thackery, Wm. Harrison Ainsworth, Mark Lemon, William Carleton, Thomas Miller, J. R. Planche, Martin Farquhar Tupper, Alfred Tennyson, Ebenezer Elliot, Charles Mackay, together with occasional articles from Mary Howitt, Mrs. S. C. Hall, Hon. Mrs. Norton, Harriet Martineau and many others our present space will not allow us to specify. Translations of some of the minor Tales of Eugene Sue, Alexander Dumes, Geo. Sand, &co will be given, if free from the pernicious influence of many French tales, and particular care will be taken that nothing demoralizing in its tone ever finds a place in the pages of the Dollar Magazine.

The publisher has also made arrangements for a number of tales from the German and Spanish, and is confident that he possesses facilities for their selection unsurpassed by any one in America. It will be readily acknowledged by any one at all conversant with literature in every form, that

HOLDEN'S DOLLAR MAGAZINE,

is the largest, cheapest and best periodical in the World, and he challenges comparison with anything published in Europe or America, satisfied that the sovereign people will decide for themselves as regards the merits of the respective works.

Holden's Dollar Magazine will be issued monthly, in Nos. of 64 pages each, printed on fine paper, manufactured expressly for the work, and of extra quality, with new and beautiful type. Terms—ONE DOLLAR per annum, payable invariably in advance: **Six Copies for Five Dollars,** or 25 copies for 20 dollars, when mailed to one address,

Address, post paid,

CHARLES W. HOLDEN,

Publisher of Holden's Dollar Magazine, 109 Nassau st., N Y.

N.B. Country papers copying this advertisement and noticing us editorially, will be entitled to a copy for one year, without an exchange. Those doing so will send one marked copy to "Holden's Dollar Magazine." d18 4t

☞ The above is prepared to execute all orders at the shortest notice and on the most reasonable terms.

Johnson's Improved Shingle Machine.

THE Subscriber having received Letters Patent for an improvement in the Shingle Machine, is now ready to furnish them at short notice, and he would request all those who want a good machine for sawing shingles, to call on him and examine the improvements he has made, as one eighth more shingles can be sawed in the same given time than by any other machine now in use.

Augusta, Maine, Oct. 1, 1847. J. G. JOHNSON.

AMERICAN HARDWARE.

THE SUBSCRIBER having been engaged in selling American Hardware on commission for 7 years, solicits consignments from manufacturers, and will refer to those who have employed him the above number of years. SAMUEL C. HILLS,

n8 189 Water st

Machinists Tools.

THE Subscriber is now manufacturing a superior article of Large Turning and Screw Cutting Lathes, Drilling Machines, &c. to which he would respectfully call the attention of Machinists and others requiring the above articles. Also, Machinery of every description, manufactured to order, at 42 Gold street, New York. G. B. HARTSON. o2 1m*

A LITERARY AND FAMILY PAPER.

THE YANKEE BLADE;

A Home Journal and Fireside Companion

DEVOTED TO

Literature, Education, Morals, Fun, News, &c.

Published every Saturday at $2 per annum

☞ This Literary and Family Journal having during the past six years, met with the most brilliant and unexpected success,—the Publishers, grateful for the many favors shown to them, have determined to make such improvements in its character, as will greatly enhance its attractiveness and value, and render it worthy of still higher applause. The paper has been dressed throughout in a style of surpassing elegance and beauty, while its size has been greatly enlarged, and various other improvements introduced, making it one of the best and most attractive newspapers in the Union.

Among other leading features, the Blade will contain from one to four of the

Richest and most Interesting Stories of the Day.

Not only original, but gems of the European and American Magazines, and in all cases a preference will be shown to such as can be published entire in a single paper. In addition its columns will be stored with POPULAR ESSAYS BY ABLE WRITERS, Choice and beautiful Poems, Gleanings from New Works, Selections from Foreign Journals, Mirth-creating Sketches, "Whittlings," Jokes, Scraps, News Items, and every thing else that can give zest and

In brief, our object will be to render it an agreeable, entertaining and ever welcome Family Visitor, brimming always with INSTRUCTION and AMUSEMENT, and especially desirable to the FAMILY CIRCLE.

THE LADIES MAGAZINE AND CASKET OF LITERATURE,

is also published at the same office. Terms: $1,00 per annum in advance. It will contains superb engravings, Music, Flowers, &c &c. It is one of the handsomest Dollar Magazines published.

☞ J. A. Gilbert, 22 Ann st., and George Dexter, 32 Ann st., New York, are Wholesale Agents for the Blade and Magazine.

MATHEWS, GOULD & CO.

Publishers, 138 1-2 Washington st., Boston, Mass.

n20 3m

To Mill Owners.

HAVILAND & TUTTLE'S Patent Centre Vent Pressure Water Wheel.—These wheels are now in successful operation in many towns in Maine, Massachusetts, and Rhode Island, and are found to surpass in power and facility of adaptation any water wheel now in use. This wheel was awarded the silver medal at the Fair of the American Institute recently held in New York and a diploma at the Mechanics' Fair in Boston.

The wheels are manufactured and for sale by the FULTON IRON FOUNDRY CO., South Boston, Mass.,—where the wheels can be seen and any information concerning them had.

Patent Rights for different States, Counties, &c. for sale, as above. n20 3m*

Veni! Vidi! Emi!

☞ THIS IS THE MOTTO OF ALL THOSE THAT HAVE EXAMINED KNOX'S NEW FALL STYLE OF HATS, with a view of buying—

I CAME! I SAW! I BOUGHT!

His BON TON Establishment (as all know) is at 128 Fultou street. s18 3m

Lap-welded Wrought Iron Tubes

FOR TUBULAR BOILERS,

From 1 1-4 to 6 inches diameter, and any length, not exceeding 17 feet.

THESE Tubes are of the same quality and manufacture as those extensively used in England, Scotland, France and Germany, for Locomotive, Marine and other Steam Engine Boilers.

THOMAS PROSSER, Patentee,

d26 28 Platt street. New York

GENERAL PATENT AGENCY.

REMOVED.

THE SUBSCRIBER has removed his Patent Agency from 12 Platt to 189 Water street.

The object of this Agency is to enable Inventors to realize something for their inventions, either by the sale of Patent Goods or Patent Rights.

Charges moderate, and no charge will be made until the inventor realizes something from his invention.

Letters Patent will be secured upon moderate terms. Applications can be made to the undersigned, personally or by letter post paid.

n8 SAMUEL C. HILLS, Patent Agent.

DAUGERRIAN GALLERY.

GURNEY'S

PREMIUM DAUGERRIAN GALLERY.

No. 189 Broadway, N. Y.

☞ Pictures taken at this establishment warranted to give satisfaction. j24

Henry Waterman, 239 Cherry st.

MILLWRIGHT AND ENGINEER.

☞ Steam Engines, Mill Work, Horse Mills, Castings, and Machinery of all kinds, executed with promptness and at low rates. d11 3m*

ASHE,

MANUFACTURER OF

Spring Box, Tailor's, Surveyor's, and every other kind of

Measure Tapes,

No. 133 Fulton Street, N. Y.

Factory at Green Point, Bushwick, L. I. d25 2m*

TO PAINTERS, &c.

For Sale

No. 1—Chemical Oil Gold Size for Sign Writing and Striping, &c.

No. 2—Chemical Oil Gold Size for *Carved Work* and general Decoration.

No. 3—Chemical Dryer, for all kinds of paints—prepared for use. It is one of the most powerful and most convenient, of the kind, ever yet compounded.

N. B. The above gold sizes work as Pleasantly as any common oil color and will gild in 12, 24 or 36 hours.

These compounds are all tested, but should any be found to fail, they can be returned and others given in exchange, or the money refunded, provided they have not been adulterated.

QUARTERMAN & SON,

House Painters, Grainers, &c.

n6 3m* 18 Burling Slip, New York.

© 1848 SCIENTIFIC AMERICIAN, INC

For the Scientific American.

Japanning.

(Continued from our last.)

BLACK GROUNDS.

Black grounds for japans may be made by mixing ivory black with shellac varnish, or for coarse work, lamp black and the top coating of common seedlac varnish.

A common black japan may be made by painting a piece of work with drying oil (oil mixed with lead,) and putting said work into a stove not too hot but of such a degree, gradually raising the heat and keeping it up for a long time, so as not to burn the oil and make it blister. This process makes a very fair japan and requires no polishing

TORTOISE SHELL JAPAN.

This varnish is prepared by taking of good linseed oil one gallon and of umber half a pound, and boiling them together until the oil becomes very brown and thick, when they are strained through a cloth and boiled again until the composition is about the consistence of pitch, when it is fit for use. Having prepared this varnish, clean well the copper or iron plate or vessel that is to be varnished (japanned) and then lay vermillion mixed with shellac varnish, or with drying oil diluted with good turpentine, very thinly on the places intended to imitate the clean parts of the tortoise shell. When the vermillion is dry brush over the whole with the above umber varnish diluted to a due consistence with turpentine, and when it is set and firm, it must be put into a stove and undergo a strong heat for a long time, even two weeks will not hurt it. This is the ground for those beautiful snuff boxes and tea boards which are so much admired, and those grounds can be decorated with all kinds of paintings that fancy may suggest, and the work is all the better to be finished in an annealing oven.

PAINTING JAPAN WORK.

The colors to be painted are tempered generally in oil, which should have at least one fourth of its weight of gum sanderac or mastic dissolved in it, and it should be well diluted with turpentine, that the colors may be laid on thin and evenly. In some instances it does well to put on water colors or grounds of gold, which a skilful hand can do and manage so as to make the work appear as if it was embossed. These water colors are best prepared by means of isinglass size mixed with honey or sugar candy. These colors when laid on must receive a number of upper coats of the varnish we have described before.

In our next we shall treat of the finishing of japanned work.

For the Scientific American.

To Dye Indigo Blue on Cotton.

Good indigo is as high in price as cochineal, therefore this color is a valuable one not only on account of its permanency, but because the stuff that makes it is so expensive. It has, therefore, received great attention in the economising of the indigo, so that no particle of its coloring matter may be lost. The art of indigo blue dyeing, therefore is distinct in itself and it takes a long time to be master of it, and unless the operator has a good eye for color, he will never be profitable, either to himself or employer, as the feeding of the vats and the *striking* of different shades of color, all depend upon this faculty. This color is so well arranged and systematized by the dyer, that shades of half a cent in price per pound, in the ratio of prices are made and these must be done, so that there will just be a certain quantity of indigo taken up on the goods and none lost, for such a valuable dye drug cannot be lost with impunity in the smallest quantities.

TO SETT A BLUE VAT.

Take 10 lbs. of good Bengal or American indigo and grind it in water so that it will be as fine as flour, so fine that no grit will be felt in the fingers when rubbed between them.—Indigo grinds easier if steeped in warm water for four hours before being put into the grinding mill. Ten pounds of indigo thus ground is put into a clean cask, such as a wine or oil puncheon, filled nearly full with clear water. To this is added fourteen pounds of the sulphate of iron (copperas) and sixteen pounds of the flour new slacked pure lime. This mixture is to be well stirred every few hours for two or three days, when the liquor in the vat will have a fine deep green color, a sure sign that it is in good order for dyeing. There is one thing to be observed, however, which is, that the rake for stirring the vat must be of an oval shape, or like a disc on the end of a long stick, the disc to be of steel, very thin, as the lime, copperas and indigo unite together and stick in lumps at the bottom of the vat, and the vat must be raked from the bottom until all the stuffs are mixed in a wet powder.

Before a blue vat is used for dyeing, it must not have been disturbed after being raked for twelve hours, and then whatever is wanted to be dyed must be dipped and handled, so as not to disturb the sediment at the bottom, and then where a vat is used, it must be stirred up again and not touched until it is to be used for dyeing. A thin crust gathers on the surface of a blue vat after it is stirred up, which keeps out the action of the atmosphere, and if this thin crust is broken the indigo sinks and will not give out its color until stirred up and left to settle again. The cause of this is the effect of a law which is too abstract to be of any use to explain here, and it would take up too much space to do so. We merely state the fact. When cotton is dipped in a blue vat it is not blue but green, and holds this green color until it is exposed for a short time to the atmosphere, when oxygen is absorbed and a deep blue the result. Blue dyeing is, therefore, an unhealthy occupation, as in a close room the atmosphere is deprived of much of its vital principle. The deepness of blue shades are made by frequent dippings and airings. Two vats, the one set weaker than the other and the cotton squeezed out of the one (the weakest) aired and finished out of the strongest, will enable a small factory to do considerable work. We might describe the system of blue dyeing upon a large scale, but this of itself would require almost a volume of matter; our object is to describe so as to be a benefit to a number who would manufacture a little for themselves. Blue vats must be fed as it is termed, from time to time, that is when they look blackish, they must get a little copperas and lime added, and be well stirred up, as the indigo does not give out its coloring in the blue vat but very slowly, but more economically than by any other plan. By frequent dippings and feedings as we have directed a cotton blue vat will dye a great quantity of goods and work up all its indigo until the liquor is quite whitish. When the vat must be renewed, by saving all the clear liquor and throwing away all the grounds or sediment, and adding as before directed, filling up with clear water what is wanting in the old liquor to fill the vat.

Five vats are called a sett, and to work indigo very advantageously, five setts are necessary. A water tight wooden box may be used for a vat instead of a hogshead, and some vats are made of iron. The proportions we have given for setting a blue vat will enable any person to set a larger or smaller one, by varying the quantities of the dye drugs. The liquor wrung or dripped out of goods must not be thrown away, but always returned to the vat again.

Bengal Lights.

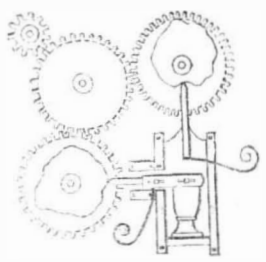
Take of the nitrate of potass (saltpetre) 8 parts, sublimed sulphur 4 parts and antimony 1 part, and let them all be mixed in powder and beat firmly into a stout iron cup and set on fire and it will give an intense luminous light and if a little camphor is added it is still more brilliant. Such lights have been made use of for signals at sea, by communicating to a great distance at night.

Thunder Powder.

If 3 parts of saltpetre, 2 parts of pearl ashes and 1 of sulphur be mixed well together, and sixty grains of this mixture be held over a candle in a metal spoon, or over a fire on a shovel, it will explode with a loud report.—This mixture must be preserved in a well corked phial.

MECHANICAL MOVEMENTS.

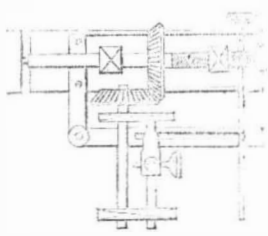
Curved Figures.



The above cut is a represeutation of a movement whereby irregular lines may be cut in a manner different from that of Blanchard's machine. The plan is not so simple, but it is much older and has been long known. By the proper construction and connection of the upper figure and the wheels being put in motion by the pinion and perpendicular and horizontal lines and points of equal length carried to the surface of the first and third wheel, will on being passed over the figure above describe curved lines on the block on the wheel below. Those lines may be so constructed as to produce from an original figure an endless number of duplicates, and by the lines between the upper and lower wheels being of various lengths, any size may be produced.

This cut may be a useful hint to many who are seeking to supersede the traverse mode of mechanical turning of patterns.

Curves.



This is another arrangement whereby spiral lines may be cut on revolving cylinders. The nut which is seen on the horizontal screw in the first figure is attached to a carriage on which is seen an arm fastened by two screws. At the extremity of this arm is a horizontal piece with a slot held at its opposite extremity by a long screw rod which also moves along with the carriage. Thus supposing the bevils to be put in motion, the slot piece would be traversing and the small pointer which is seen against the shaft of the horizontal bevil would remain stationary; but if the slot piece be placed in an oblique direction by means of the screw rod to the right, the pointer will be traversed along the shaft and describe a spiral line thereon.

Chloroform.

This substance, which has lately been discovered by Professor Simpson, of Edinburgh, is made as follows: Four pounds of chloride of lime is added to twelve pounds of water and twelve fluid ounces of rectified spirits and distilled as long as a dense liquid which sinks in the water that covers it over, is produced. Great care must be taken to have this pure, and the test is a perfect insolubility in water; if it mixes in water it is not pure, and it is apt to be attended if so used, with troublesome results. A few drops of it when placed in a handkerchief before the mouth, cause almost instant insensibility, acting far more rapidly than ether. It is inodorous and excites little or no coughing and is said not to cause headache or sickness and those unpleasant effects attending ether. It must be properly prepared and applied Prof. Simpson's discovery must be a great benefit to medical science. We are positive that it will perfectly cure whooping cough if it is properly applied.

Dying in Music.

A bird in captivity has been known to sing more and louder than usual, until it fell dead at the bottom of the cage, to solict attention to its deficiency of food, from the want of which it at last perished; and another instance is related where the little creature sang earnestly when surrounded by the flames of a burning house, Under such circumstances we may be allowed to suppose that an attentive ear might have detected a variation in the notes from the usual song: for under much less exciting circumstances a change is known to occur in the modulation.

A warning to Cockroaches.

A writer in the Express says; This being the season when the cockroach, the pest of our kitchens commence their nocturnal excursions, the following receipe may call forth the grateful acknowledgments of those of our readers who suffer from the presence of this loathsome insect.

Take a sixpenny loaf of wheat bread—the staler the better, reduce it to a crumb, (of course after paring off the crust)then in a pint of water put two teaspoonsful of cayenne pepper, one of pulverised orisseed, half a drachm of saltpetre; the same quantity of white lead, and a wine glass full of extract of hops.—Now throw in your crumbs of bread, and digest for six hours in a moderate heat; then bottle it and keep it in a dark cellar. Three or four drops of this liquor or rather pastry, on a lump of sugar and some dozen lumps strewed about the kitchen will remove the pest in less than no time.

To drive away Ants.

I saw in your paper a plan to drive away red ants by feeding them with bacon; but the following is better than that; it is to drive away black ants; when they trouble your sugar box, &c., just roll up a small piece of camphor gum in a paper, and put inside the box, and it will soon kill or disperse all these intruders; sage tea leaves thrown in their way are also very troublesome to them —*Ohio Cultivator.*

The Shooting Fish.

A fish in Java called the Jaculator, catches flies and insects by throwing water from its mouth. It is said that it seldom misses its aim at a distance of five or six feet, bringing down a fly by a single drop.

Whooping Cough.

A teaspoonful of oil to a tablespoonful of molaases, a teaspoonful of the mixture given whenever the cough is troublesome, will afford relief at once it is said, and in a few days effect a cure. The same remedy it is also affirmed relieves the croup however violent the attack.

THE NEW YORK

SCIENTIFIC AMERICAN:

This paper, the most popular weekly publication of the kind in the world, is published *At* 128 *Fulton Street, New York, and* 13 *Court Street, Boston,*

BY MUNN & COMPANY.

The principal office being at New York.

The SCIENTIFIC AMERICAN is the Advocate of Industry in all its forms, and as a Journal for Mechanics and Manufacturers, is not equalled by any other publication of the kind in the world.

Each number contains from FIVE to SEVEN ORIGINAL MECHANICAL ENGRAVINGS of the most important inventions; a catalogue of AMERICAN PATENTS, as issued from the Patent Office each week; notices of the progress of all new MECHANICAL and SCIENTIFIC inventions; instruction in the various ARTS and TRADES, with ENGRAVINGS; curious PHILOSOPHICAL and CHEMICAL experiments; the latest RAILROAD INTELLIGENCE in EUROPE and AMERICA; all the different MECHANICAL MOVEMENTS, published in a series and ILLUSTRATED with more than A HUNDRED ENGRAVINGS, &c. &c.

This Journal is not only useful to the Mechanic and Manufacturer, but instructive the Farmer, apprising him of all the improvements in Agricultural Implements, besides to instruct him in all the Mechanical Trades.—As a family paper, the Scientific American will convey more useful Intelligence to children and young people, than ten times its cost in schooling, and as a text book for future reference, (it being in quarto form, paged, and suitably adapted to binding,) each volume will contain as much useful information as a large library.

The Scientific American has already attained the *largest* circulation of any weekly mechanical journal in the world, and in this country its circulation is not surpassed by *all* the other mechanical papers combined.

☞ For terms see inside

© 1848 SCIENTIFIC AMERICIAN, INC